CHG®

HOSPITAL BEDS

User Manual for Spirit™ Beds

Spirit Plus™ • Spirit Select™

Please read carefully before using your new bed

The Spirit™ Bed

1-70-001 – Q

Contact Information	
Technical Service	Phone: (519) 963-4010 Toll Free: 1 (866) 516-5446 Fax: (519) 963-4013
Mailing Address	CHG Hospital Beds Inc. 1020 Adelaide Street South London, Ontario Canada N6E 1R6

To ensure prompt and accurate attention to your concerns please have the following information available before you call:

Spirit™ Service Call Information	
Your facility's **phone number**:	
Your facility's **fax number**:	
Bed(s) **Model and Type**:	
Bed(s) **Serial Number**	
Date of Purchase:	
List of **defective part(s)**:	
List of deficiencies or **type of problem**:	

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Spirit Plus™ Bed – Quick Reference Guide

To Operate the Bed:

Use the footboard staff control, rail controls, or the pendant to raise or lower the head section, the knee section, or the entire bed.

To Operate Electronic CPR:

PRESS and HOLD the CPR button to flatten both the head and knee sections simultaneously.

To Operate Trendelenburg:

PRESS and HOLD the TREND (Trendelenburg) or rev.TREND (Reverse Trendelenburg) button on the footboard control to achieve either function. To level the bed, PRESS and hold the opposite function until the bed automatically stops in the horizontal position.

To Operate 'Chair':

PRESS and HOLD the CHAIR button. Green LED illuminates when full CHAIR position is achieved. **PRESS and HOLD** CHAIR button again to level bed. If Green LED is not illuminated **PRESS and HOLD** the CPR button to flatten both the head and knee sections and **PRESS and HOLD** the TREND button until the bed automatically stops in the horizontal position.

To Operate 'Auto Contour':

Press the CONTOUR button so that the green light is on. Knee section will raise automatically when head section is raised. (NOTE: KNEE lock-out will override Auto Contour).

Lock-Outs:

The side rail controls and pendant can be locked or unlocked (to restrict patient use). Lock-outs for each bed function are located on the footboard staff control underneath each function. When the LOCK button LED is illuminated, patient control of that particular function with the side rail controls or pendant is restricted. If the LOCK button LED is not illuminated, then patient control of that function is permitted.

Master Lock-Out:

To restrict all side rail, pendant, ***and*** footboard controls, press all three LOCK buttons simultaneously (the LOCK button LED's will sequentially flash). When Master Lock-Out has been activated, the Electronic CPR function and Nurse Call remains operable.

To Operate Plastic Siderails:

To lower the rails, gently depress the green PRESS button, then rotate the rail down. Head rails rotate toward the headboard, foot rails rotate toward the footboard. The rail will automatically lock in the UP position.

To Move and Lock the Bed:

Use the Central "Lock & Steer" system:

BRAKE: All four wheels are locked in "BRAKE" mode
STEER: Foot-end wheels are locked in "STEER" mode, head-end wheels swivel freely
NEUTRAL: All four wheels swivel freely in "NEUTRAL" mode

Power Status Indication:

LED is solid GREEN:	Bed is plugged into an AC power outlet and the battery is fully charged
LED is flashing GREEN:	Bed is plugged into an AC power outlet and the battery is charging
LED is solid RED:	Bed is running on battery power
LED is flashing RED:	Bed is running on battery power but has used up the battery power. Plug bed into an AC power outlet and allow battery to charge for 24 hr
LED is alternating flashing GREEN and RED:	Bed is plugged into an AC power outlet but there is a problem with the battery or another component. Service bed immediately

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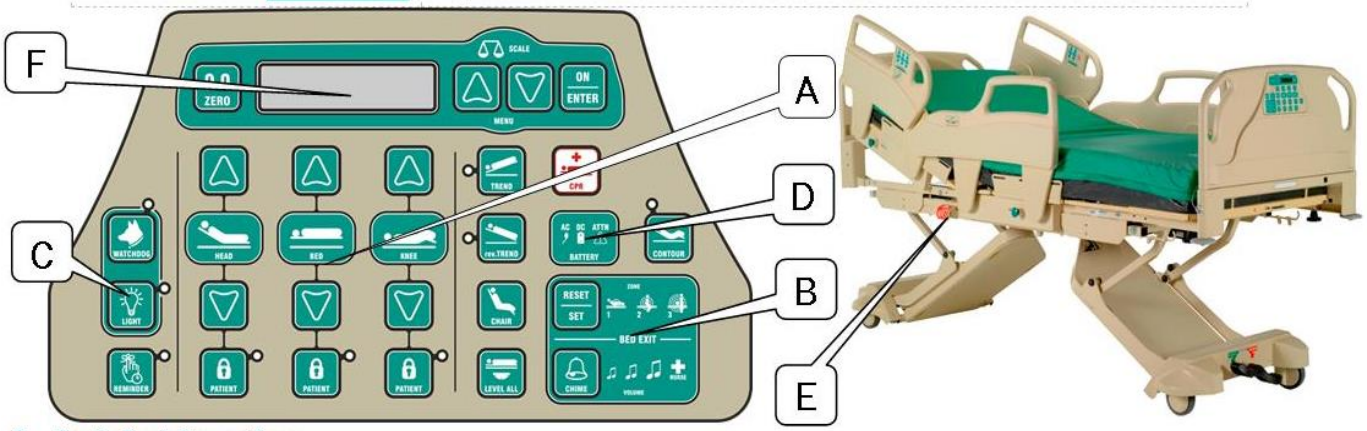
CHG HOSPITAL BEDS Quick Reference Guide
Spirit Select™ with manual CPR release



A. Basic Bed Operations

Bed Articulations	Use footboard or siderail controls to raise or lower the head section (back rest) and/or the knee section of the mattress deck or the entire bed. **PUSH** and **HOLD** the UP/DOWN arrow buttons to achieve desired positioning.
Emergency CPR	**PUSH** and **HOLD** the CPR button to flatten the head (backrest) and knee sections of the mattress deck in an emergency.
Trend/ Reverse Trend	**PUSH** and **HOLD** the TREND or rev.TREND button to achieve either function. To level the bed, press and hold the opposite TREND function button. The bed will automatically stop once level.
Chair	**PUSH** and **HOLD** the CHAIR button until the bed stops in the desired chair position. **PUSH** and **HOLD** the LEVEL ALL button to flatten the mattress deck and to level the bed.
Auto Contour	Press the CONTOUR button to engage the Auto Contour function. An illuminated CONTOUR button indicates that the Auto Contour function is engaged. The knee section will automatically raise or lower when the head (backrest) section of the mattress deck is articulated. The Auto Contour function will be ignored when the knee Lock-Out has been activated.
Level All	**PUSH** and **HOLD** the LEVEL ALL button to flatten head (backrest) and knee sections of the mattress deck.
Lock-Outs	To restrict patient use of all siderail controls, press the patient LOCK button under each function. When the LOCK button is illuminated, patient use of that particular function from any siderail control is restricted. When the LOCK button is not illuminated, patient use of that function is permitted. **NOTE:** The footboard staff control remains functional when patient Lock-Outs have been activated.
Master Lock-Out	To restrict all siderail and footboard controls, press all three LOCK buttons simultaneously. When the Master Lock-Out has been activated, all three LOCK buttons will flash sequentially. To de-activate the Master Lock-Out, press all three LOCK buttons simultaneously again. **NOTE:** The Emergency CPR function and Nurse Call buttons remain functional when the Master Lock-Out has been activated.

B. Bed Exit Alarm

1. Place patient in bed
2. Press SET/RESET button to cycle through sensitivity levels (zones); stop at appropriate level
3. An audible "chirp" will sound to indicate that Bed Exit Alarm has been armed
4. Press CHIME button to cycle through volume and priority call options; stop at desired level

A Bed Exit Alarm Can Be Silenced By:

- Pressing either SET/RESET or CHIME buttons. This will pause Bed Exit Alarm. To resume Bed Exit Alarm operation, return patient to bed and press SET/RESET button. If patient is not returning to bed, press SET/RESET button to deactivate Bed Exit Alarm; OR
- Returning patient to original position in bed. A "chirp" will sound to indicate Bed Exit Alarm has been re-activated.

To Change Bed Exit Alarm Chime (Song): **PUSH and HOLD** CHIME button for 3 seconds to jump directly to menu section that will allow you to cycle through different chimes. When desired chime is heard, press ON/ENTER button to select.

C. Underbed and Night Lights

The Underbed and Bumper Lights can be used to enhance the room lighting. To control the user selectable light configuration, simply press-and-hold the LIGHT key for 4 seconds. The Lights Menu will be displayed on the LCD display. Use the MENU keys and ON|ENTER key to select various configurations.

Bed Exit Nightlight: Automatically illuminates when patient exits bed. Automatically turns off when patient re-enters bed or after 15 minutes has elapsed.

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D. Power Status Indicator

Green AC only	Bed is plugged into wall and the battery is fully charged
Green AC and flashing Yellow DC	Bed is plugged into wall and the battery is charging
Yellow DC only	Bed is running on battery power
Yellow DC and flashing Red ATTN	Bed is running on battery power but has used up the battery reserve power. Plug bed into wall and allow battery to charge for 24hr
Green AC and flashing Red ATTN	Bed is plugged into wall but there is a problem with battery or another component. Confirm battery is properly connected and/or service bed immediately

E. Manual CPR Release

In the event of a medical emergency, activation of the manual CPR release handle will mechanically flatten the head section (backrest) of the mattress deck allowing staff to administer CPR to the patient. The knee/foot sections will also be automatically flattened.

Activating Manual CPR Release: To flatten the backrest, **PULL UP and HOLD** on the CPR handles (located on either side of the bed).

Resetting the Head Actuator: The head actuator **MUST** be reset every time the manual CPR handle is pulled. The bed will automatically reset the head actuator once the backrest has been completely flattened. The LCD display will display a message notifying staff that the CPR reset procedure is in progress. In the event of an incomplete manual CPR release or interrupted reset procedure, a message will be displayed prompting staff to **PUSH and HOLD** the CPR button or to **PULL UP and HOLD** the manual CPR handle to complete the CPR reset procedure. An audible "chirp" will sound to notify staff that the CPR reset procedure has been successfully completed.

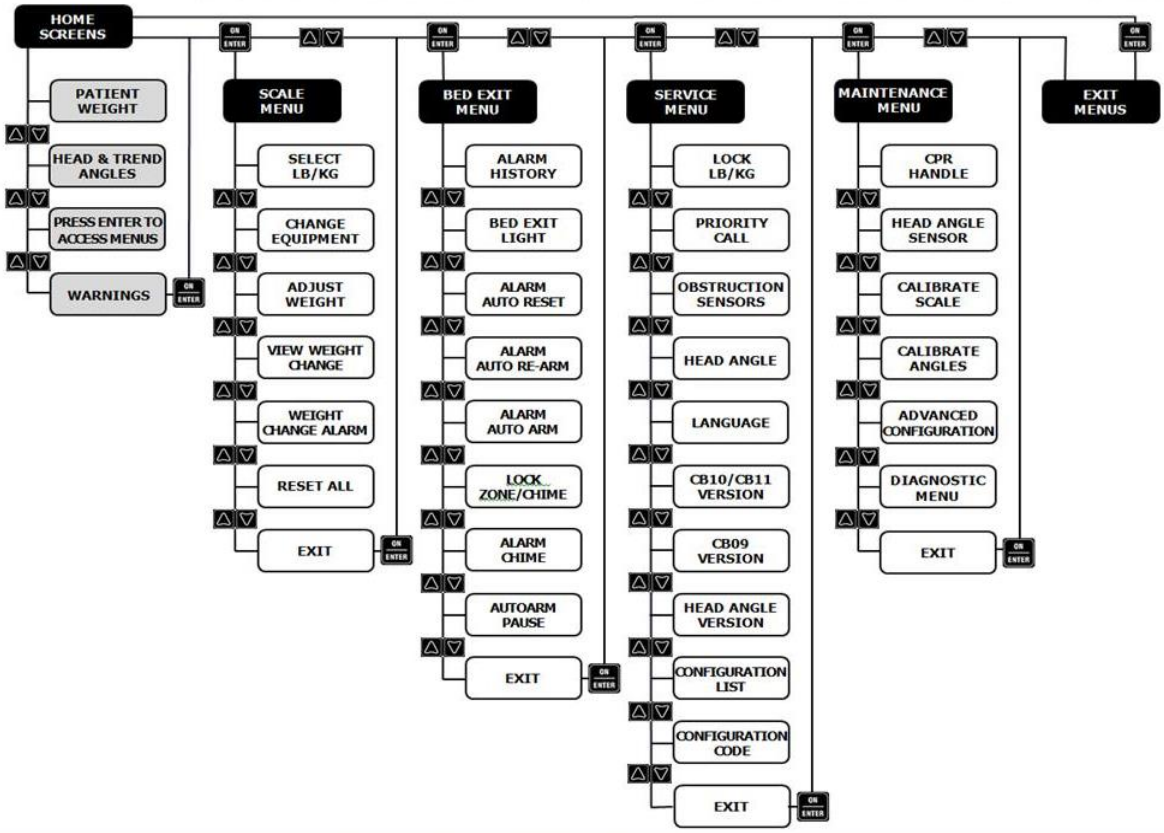
F. Scale / LCD Display

Press the ON/ENTER button to "wake up" the Home Screen to show Patient Weight . Press the UP/DOWN buttons to scroll between the additional Home Screens which show Head & Trend angles and warnings (if any).

Scenario	Recommended Action
Before each new patient is placed in the bed	Zero the scale. This will automatically reset adjusted patient weight and bed exit alarm history.
Before adding clinically necessary equipment, additional linens, pillows, etc	Use the Change Equipment feature. This will allow any changes to not impact displayed patient weight.

MENU NAVIGATION:

- Use the UP/DOWN arrow buttons to scroll through the following menus.
- Press the ON/ENTER button to make selection
- Press the 0.0/ZERO button to return back or "escape" to the home screen at any time from any menu option screen.



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A Message from CHG Hospital Beds

To Our Valued Customers,

Thank you for selecting CHG Hospital Beds as your hospital bed provider and congratulations on your purchase of a Spirit™ bed. You are a part of the growing majority of healthcare providers that recognize the benefits of a low hospital bed.

CHG Hospital Beds is committed to meeting the needs of our customers through quality products that are innovative, user-friendly, easy to maintain, and most importantly, focused on patient safety. We are sure that your hospital will enjoy the benefits and safety features of the Spirit™ bed for many years to come.

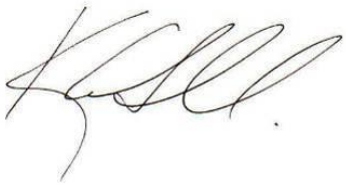
The Spirit™ bed is manufactured in London, Ontario, Canada. Each and every Spirit™ bed is inspected and tested by our team of highly trained and dedicated quality technicians to ensure that all Spirit™ beds meet our strict quality standards before entering your hospital.

Our sales team is focused on providing exceptional sales support before, during, and after the delivery of your Spirit™ bed. If at any time you have questions or concerns regarding your Spirit™ bed, we strongly encourage you to call us at 1-866-516-5446. Our hands-on company philosophy enables us to respond to our customers quickly and effectively.

We recommend that you carefully read this Spirit™ Bed Owner's Manual prior to operating your bed. Becoming acquainted with the safe operation and maintenance procedures outlined in this manual will ensure proper bed use and can extend the service life of the bed.

Sincerely,

Steve Walker
Vice President of Operations
CHG Hospital Beds



Kyle Sobko
Vice President of Sales & Marketing
CHG Hospital Beds

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Section 1:

Specifications & Precautions

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1.1 Full Bed Warranty

CHG Hospital Beds' pro-rated warranty covers manufacturing defect, or failure due to workmanship or materials.

CHG Hospital Beds warrants to the original purchaser of its products that the electrical components are guaranteed to be free from manufacturing defect for one (1) year from the date of purchase.
CHG Hospital Beds warrants to the original purchaser of its products that the product or any part thereof, in the judgment of CHG Hospital Beds, will not be defective in material or workmanship for one (1) year from date of original purchase.
CHG Hospital Beds specifically warrants to the original purchaser of its products that the reinforced fibreglass sections of the mattress deck will not be defective in material or workmanship for ten (10) years from date of original purchase.

Such defects will be repaired or replaced (at the company's option) free of charge for parts only, provided the defective product is shipped to the factory or an authorized depot at the customer's own expense. Shipping charges for return of the product to the customer will also be at the customer's own expense.

This warranty does not include any labour or shipping charges incurred in replacement part installation or repair of any such part. CHG Hospital Beds' sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

After one year, for the next four years, frame parts only will be covered by the warranty according to the following five (5) year prorated fee schedule:

2nd year	frame parts only	list price less 60%
3rd year	frame parts only	list price less 40%
4th year	frame parts only	list price less 20%
5th year	frame parts only	list price less 10%

Parts, in the judgment of CHG Hospital Beds, found to be damaged through normal wear and tear, impact, abuse, overloading, fire, lightening, water damage, power surges, brown-outs, improper supply voltage or use of other manufacturer's head and/or footboards and/or accessories will not be covered. Replacement parts will be charged out at the full list price.

Any alteration made to and/or performed on the bed and/or one of its components voids this warranty.

A Return Goods Authorization number (RGA) must be obtained before returning any products or parts to the factory. We regret that no products will be accepted at the factory without an RGA number. No other warranty expressed or implied by CHG Hospital Beds or its agents shall be considered valid.

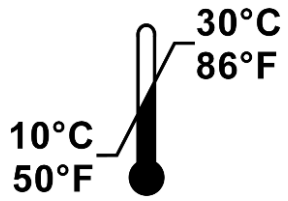
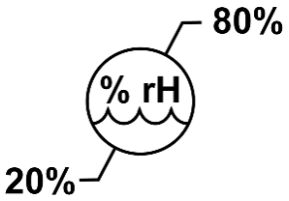
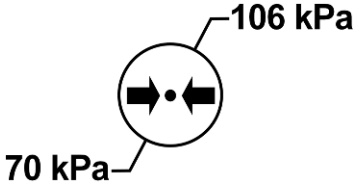
CHG Hospital Beds Inc.
1020 Adelaide Street South
London, Ontario
Canada
N6E 1R6

Phone: (519) 963-4010
Fax: (519) 963-4013
Toll Free: (866) 516-5446

1.2 Intended Use

The Spirit™ bed is intended for low to moderate acuity patients in the medical and/or surgical area of the hospital. The Spirit™ bed is also intended for use as a general-purpose variable height hospital bed for general care, post-operative and general medicine wards. The Spirit™ bed is intended for used in Application Environments 1-3, 5 as described in IEC 60601-2-52, Clauses 201.3.201 - 205.

Application Environment		**Use of Spirit™ Bed**
No.	**Description**	
1	Intensive/critical care provided in a hospital where 24 hour medical supervision and constant monitoring is required and the provision of life support system/equipment used in medical procedures is essential to maintain or improve the vital functions of the patient.	Suitable
2	Acute care provided in a hospital or other medical facility where medical supervision and monitoring is required and medical equipment used in medical procedures is often provided to help maintain or improve the condition of the patient.	Suitable
3	Long-term care in a medical area with medical supervision is required and monitoring is provided if necessary and medical equipment used in medical procedures may be provided to help maintain or improve the condition of the patient.	Suitable
4	Care provided in a domestic area where medical equipment is used to alleviate or compensate for an injury, disability, or disease.	Not Suitable
5	Outpatient (ambulatory) care which is provided in a hospital or other medical facility, under medical supervision where medical equipment is provided for the need of persons with illness, injury, or disability for treatment, diagnosis, or monitoring.	Suitable

Environmental Conditions for Normal Use		
		
Ambient Temperature Range	Ambient Humidity Range (Non Condensing)	Atmospheric Pressure Range

1.3 Standard Conventions Used in this Manual

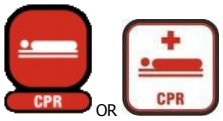
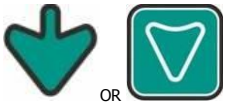
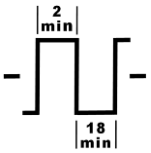
This manual includes information essential to the safety of the patient, staff, and equipment during the normal operation of the Spirit™ bed. Before operating the Spirit™ bed be sure you have read and understood the contents of this manual. It is important that you use this equipment in accordance with the procedures outlined in this manual. As you read through this manual be alert to the four signal words.

⚠ DANGER	Information appearing under the **DANGER** caption concerns the protection of patient, staff and others from the immediate and imminent hazards that, if not avoided, will result in immediate, serious personal injury or loss of life in addition to equipment damage.
⚠ WARNING	Information appearing under the **WARNING** caption concerns the protection of patient, staff, and others from potential hazards that can result in personal injury or loss of life in addition to equipment damage.
⚠ CAUTION	Information appearing under the **CAUTION** caption concerns the protection of patient, staff and others from potential hazards that can result in minor personal injury or equipment damage.
NOTE:	Information appearing in a **NOTE** caption provides additional information which is helpful in understanding the item being explained.

1.3.1 Patient Left & Patient Right Determination

CHG Hospital Beds' determination of the "Patient Left" and the "Patient Right" side of the bed is made from the patient's point of view while positioned normally on the bed facing up.

1.4 Symbols Used on the Spirit™ Bed

	PROTECTIVE EARTH GROUND		ELECTRONIC CARDIOPULMONARY RESUSCITATION (CPR) FUNCTION PRESS AND HOLD TO LOWER ALL SECTIONS OF MATTRESS DECK FLAT TO BED FRAME		CHAIR FUNCTION PRESS AND HOLD TO BRING PATIENT TO SITTING POSITION
	POTENTIAL EQUALIZATION (EQUIPOTENTIAL POINT)		TRENDELENBURG FUNCTION PRESS AND HOLD TO MOVE THE BED INTO TRENDELENBURG POSITION		CONTOUR FUNCTION TOGGLE TO INITIATE AUTOMATIC ACTION OF KNEE-FOOT SECTION WHEN ACTION IS INITIATED TO HEAD SECTION OF MATTRESS DECK
	SAFE WORKING LOAD THE MAXIMUM ALLOWABLE LOAD THAT CAN BE PLACE ON THE BED		REVERSE TRENDELENBURG FUNCTION PRESS AND HOLD TO MOVE THE BED INTO REVERSE TRENDELENBURG POSITION		FUNCTION LOCK-OUT ACTIVATE TOGGLE SWITCH TO RESTRICT FUNCTION OF PATIENT AND PENDANT
	MAXIMUM PATIENT WEIGHT THE MAXIMUM ALLOWABLE WEIGHT OF PATIENT THAT CAN BE PLACE ON THE BED		INITIATE ACTION TO HEAD SECTION OF MATTRESS DECK		UP CONTROL ELEVATES THE CORRESPONDING SECTION OF THE MATTRESS DECK
	READ OWNER'S MANUAL BEFORE USE		INITIATE ACTION TO ENTIRE MATTRESS DECK (HI-LO)		DOWN CONTROL LOWERS THE CORRESPONDING SECTION OF THE MATTRESS DECK
	SYMBOL TO DRAW USER ATTENTION TO AN IDENTIFIED DANGER, WARNING, OR CAUTION		INITIATE ACTION TO KNEE-FOOT SECTION OF MATTRESS DECK		ELECTRONIC FOOT SIDERAIL RELEASE
CLASS 1	EQUIPMENT CLASSIFICATION IN TERMS OF PROTECTION AGAINST ELECTRICAL SHOCK		ALTERNATING CURRENT (AC) POWER		POWER STATUS INDICATOR (SPIRIT™ & SPIRIT PLUS™)
IP54	INGRESS PROTECTION CODE (IP RATING)		TYPE B EQUIPMENT		DUTY CYCLE 2 MINUTES ON 18 MINUTES OFF
	CATALOGUE NUMBER INDICATES THE MANUFACTURER'S CATALOGUE NUMBER SO THAT THE MEDICAL DEVICE CAN BE IDENTIFIED		SERIAL NUMBER INDICATES THE MANUFACTURER'S SERIAL NUMBER SO THAT A SPECIFIC MEDICAL DEVICE CAN BE IDENTIFIED		CONSULT INSTRUCTIONS FOR USE INDICATES THE NEED FOR THE USER TO CONSULT THE INSTRUCTIONS FOR USE
	CAUTION INDICATES THE NEED FOR THE USER TO CONSULT THE INSTRUCTIONS FOR USE FOR IMPORTANT INFORMATION		MANUFACTURER INDICATES THE MEDICAL DEVICE MANUFACTURER		WEEE SYMBOL WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT DIRECTIVE

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1.5 Additional Symbols Used on the Spirit Select™ Bed

	SCALE ZERO BUTTON PRESS AND HOLD TO ZERO SCALE PRESS AT ANY TIME IN ANY MENU TO "ESCAPE HOME" TO HOME SCREEN		SET/RESET BUTTON PRESS TO TURN ON/OFF AND SELECT DESIRED BED EXIT SENSITIVITY LEVEL		LEVEL ALL FUNCTION PRESS AND HOLD WILL FULLY FLATTEN ALL SECTIONS OF MATTRESS DECK AGAINST BED FRAME AND RETURN BED FRAME TO HORIZONTAL POSITION
	DISPLAY ON/ENTER BUTTON PRESS TO ACTIVATE OR "WAKE UP" HOME SCREENS PRESS TO MAKE SELECTIONS WITHIN MENUS AND MENU OPTIONS		CHIME BUTTON PRESS TO SCROLL THROUGH CHIME VOLUME AND NURSE/PRIOIRITY CALL SETTINGS		LIGHT KEY
	MENU SCROLL ARROW BUTTONS PRESS TO SCROLL UP/DOWN THROUGH HOME SCREENS, MENUS, MENU OPTIONS, AND AVAILIABLE SELECTIONS WITHIN MENU OPTIONS		BED EXIT ALARM SENSITIVITY LEVELS		FUNCTION FEATURE
	POWER STATUS INDICATOR		BED EXIT ALARM VOLUME AND NURSE/PRIORITY CALL ACTIVIATION SETTINGS		WATCHDOG FEATURE
		NOTE: THESE FEATURES MAY NOT BE PRESENT ON ALL SPIRIT SELECT BED CONFIGURATIONS			

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1.6 Technical Specifications

Certifications			
Certified to: CAN/CSA C22.2 No. 60601-1:2008 & 60601-2-52:2011, UL 60601-1:2003, IEC 60601-2-52/C1:2010 & 60601-2-38/A1:1999, ANSI/AAMI ES 60601-1:2005/A2:2010 Conforms to: IEC 60601-1:2005/C2:2007			
Articulation Range		**Spirit Plus™ & Select™**	
Head Section Angle		0° to 60°	
Head Section Angle (Beds with High Siderails and/or Manual CPR Release)		0° to 60°	
Knee Section Angle		0° to 25°	
Foot Section Angle		0° to 10°	
Foot Section Angle in Vascular Position - Knee Fully Flat (Beds with Optional Vascular Bail)		15°	
Foot Section Angle in Vascular Position - With Knee Articulation (Beds with Optional Vascular Bail)		0° to -4°	
Trendelenburg		0° to 14°	
Reverse Trendelenburg		0° to -14°	
Mattress Deck Height - Lowest Elevation	Ø5" (125 mm) Casters	10 ¾"	273 mm
Mattress Deck Height - Highest Elevation		34"	863 mm
Minimum Deck Height Required to Accommodate Patient Lift Clearance 48" x 5" (1219 mm x 127 mm)		24"	610 mm
Underbed Clearance - Lowest Elevation		1¾"	45 mm
Mattress Deck Height - Lowest Elevation	Ø6" (150 mm) Casters	11¼"	279 mm
Mattress Deck Height - Highest Elevation		35"	889 mm
Minimum Deck Height Required to Accommodate Patient Lift Clearance 48" x 5" (1219 mm x 127 mm)		21½"	546 mm
Underbed Clearance - Lowest Elevation		2¾"	70 mm
Electrical Specifications		**120V Models**	**230V Models**
Mode of Operation - Intermittent Operation		Duty: 10% (2 Minutes ON, 18 Minutes OFF)	
Mains Input Voltage		120 Volts AC	230 Volts AC
Mains Input Current		4.0 Amps	2.1 Amps
Mains Input Current (Beds with Auxiliary Mains AC Outlet)		9.0 Amps	5.1 Amps
Mains Input Current Frequency		60 Hertz	50 Hertz
Motor (Actuator) Voltage - Safety Extra Low Voltage (SELV)		24 Volts DC	24 Volts DC
Controls Voltage - Safety Extra Low Voltage (SELV)		5-12 Volts DC	5-12 Volts DC
Power Consumption - at Maximum Load (Safe Working Load)		480 Watts	480 Watts
Power Consumption - at Idle		24 Watts	24 Watts
Auxiliary Mains AC Outlet - Maximum Output Power		120 Volts, 5 A (600 Watts)	230 Volts, 3 A (690 Watts)

Control Locations	**Spirit Plus™**	**Spirit Select™**
Footboard Staff Control	Standard Control	Enhanced Control
Siderail Controls (Patient and Staff)	Standard	Standard
Six Function Handheld Pendant	Optional	Optional
Safety Features		
Protective Earth Ground	Class I (Equipotential Point)	
Electric Shock Protection	Type B	
Enclosure Protection	IPX4	
Dual Foot Pedal – Lock & Steer Feature	Standard	
On-Board Battery Back-up	Standard	
Safety & Convenience Features on Footboard Staff Control		
PRESS and Hold Electronic CPR Function	Standard	
Trendelenburg/ Reverse Trendelenburg Capability	Standard	
Chair Positioning	Standard	
Auto Contour Mode	Standard - Toggle Button with LED	
Security		
Patient Lock-Outs - Bed Elevation, Head Section, and Knee/Foot Section (Patient Controls only)	Standard – Individual Toggle Button with LED's	
Master Lock-Out - All Patient and Staff Control Locations (including Footboard Staff Control)	Standard – Requires deactivation of Master Lock-out to operate bed	
Security Lock-Out - All Patient and Staff Control Locations (including Footboard Staff Control)	Standard – Requires facility-set user passcode to operate bed	

Dimensions & Weight	**Spirit Plus™**		**Spirit Select™**	
Length (Overall Bed Length)	91¼"	2318 mm	91¼"	2318 mm
Length - Between Head & Footboards	81"	2057 mm	81"	2057 mm
Length - Mattress Deck (in 80" Mattress Position)	79¾"	2026 mm	79¾"	2026 mm
Length - Mattress Deck (in 84" Mattress Position)	83¾"	2127 mm	83¾"	2127 mm
Width - Between Outer Edges of Siderails	40"	1016 mm	40"	1016 mm
Width - Mattress Deck	35"	889 mm	35"	889 mm
Load Capacity (Safe Working Load)	500 lbs	227 kg	500 lbs	227 kg
Weight of Bed (Empty)	520 lbs	235 kg	525 lbs	238 kg
Weight of Bed (Empty with High Siderails, Manual CPR Release, Easy Bed Extension System)			565 lbs	256 kg

Sound Pressure Level (Measured 1m from Device)			
Bed Operation - at Maximum Load (Safe Working Load)	< 54 dBA		
CB10/CB11 Confirmation/Notification "Chirp"	< 62 dBA		
Bed Exit Alarm Volume Settings	**Low Setting**	**Medium Setting**	**High Setting**
	54 - 62 dBA	68 - 87 dBA	80 - 101 dBA

**All dimensions are nominal and have approximate manufacturing tolerances of ± ½" (12.7 mm) for length/height and ± 2° for angular dimensions*

1.7 Important Electrical Precautions

AC Power Outlet Requirements	
120 VAC models	Plug the three prong power supply cord **ONLY** into a properly grounded 120 VAC, 60 Hz power outlet that is rated to at least 10 A.
230 VAC models	Plug the three prong power supply cord **ONLY** into a properly grounded 230 VAC, 50 Hz power outlet that is rated to at least 5 A.

⚠ DANGER

Possible **ELECTROCUTION Hazard**

DO NOT expose the AC power supply cord or other electrical components to water.

DO NOT allow the power supply cord, AC power outlet, auxiliary AC outlet socket (if equipped), actuators, control boxes or pendant (if equipped) to become wet or submerged during normal bed operation or when performing cleaning.

DO NOT submerge the bed frame or electrical parts. **DO NOT** allow liquids to enter electrical components. If a liquid is spilled in or around the bed, unplug the bed before cleaning. Clean up the spill and allow the bed and/or the area around the bed to dry thoroughly before using the controls again.

DO NOT open assemblies such as actuators, control boxes, battery, and pendant (if equipped). These parts are not serviceable. Only service technicians, specifically trained to service CHG Hospital Beds Spirit™ beds, should attempt to service bed and/or replace electrical components.

DO NOT use the auxiliary AC outlet socket (if equipped) if the socket receptacles appear to be damaged and/or if the plug (of the device that you are connecting the bed to) does not remain connected when inserted in the outlet socket receptacles.

⚠ DANGER

Possible **EXPLOSION Hazard**

DO NOT use near explosive gases. **DO NOT** operate this bed in the presence of a flammable anaesthetic mixture with air or with nitrous oxide.

DO NOT use this bed in Active Treatment "Ether Environments".

⚠ DANGER

Possible **FIRE Hazard** exists when connecting (plugging in) the power supply cord to an AC power outlet if oxygen administering equipment is in use.

Use either a patient nasal mask or half-length tent, ensuring the tent **NEVER** extends below the mattress deck, when administering oxygen.

⚠ DANGER

Possible **FIRE Hazard** exists if the pendant is not disabled when oxygen administering equipment is in use. If bed is equipped with a pendant, disconnect the pendant from the port at the side of the bed and insert pendant into its holster or attach pendent to bed linen using the included linen clip when not in use.

⚠ WARNING

DO NOT operate the bed if any actuator has malfunctioned or has been damaged in any manner.

DO NOT open assemblies such as actuators, control boxes, battery, and pendant (if equipped). These parts are not serviceable.

⚠ WARNING

Possible **ELECTRIC SHOCK Hazard** exists when servicing bed and/or replacing electrical components.

ALWAYS disconnect bed from the AC power outlet and ensure that the capacitor inside the CB09 control box has been fully discharged before servicing bed and/or replacing any electrical components. After the bed has been disconnected (unplugged) from the AC power outlet, fully discharge the CB09 control box by sequentially depressing the UP and DOWN buttons on one of the siderail controls or on the pendant (depending upon how bed is equipped) at least 20 times.

Only service technicians, specifically trained to service CHG Hospital Beds Spirit™ beds, should attempt to service bed and/or replace electrical components.

⚠ WARNING

All Spirit™ beds are equipped with a power supply cord storage device located at the head end of the bed. **ALWAYS** keep the power supply cord clear of any moving bed parts or mechanisms. The power supply cord should **ALWAYS** be stowed whenever moving, transporting, or storing the bed.

DO NOT allow the power supply cord and/or pendant cord to become entangled around other objects. A pinched power supply cord and/or pendant cord can become damaged and could be dangerous. Be aware of the power supply cord and/or pendant cord location especially when moving the bed.

DO NOT roll the bed over the power supply cord or pendant cord. **DO NOT** operate the bed if the power supply cord and/or pendant cord is damaged. **ALWAYS** keep power supply cord and/or pendant cord clear of moving equipment. The power supply cord is a replaceable component by service personnel. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

DO NOT position the bed so that it is difficult to disconnect the power supply cord should the need ever arise. **DO NOT** use an extension cord.

⚠ WARNING

Depending upon the features your Spirit™ bed has, it will be equipped with either a CB10 or CB11 control box. Some versions of CB10 control box are **NOT** interchangeable and **MUST NOT** be installed on some beds. Bed may not operate as intended if incorrect version of the CB10 control box is used.

NEVER install a CB10 control box on your Spirit™ bed if it originally came equipped with a CB11 control box and vice versa. Both control boxes have different wiring terminations on the circuit board.

Some versions of CB09 control boxes are **NOT** interchangeable. If your Spirit™ bed is not equipped with a CB10 or CB11 control box but contains additional electrical components (such as a DJB Junction Box), then this bed uses an older version of the CB09 control box.

ALWAYS confirm replacement part numbers and/or control box circuit board revisions are the same prior to installation. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

⚠ CAUTION

Connecting electrical equipment to auxiliary mains AC outlet effectively leads to creating a medical equipment system and can result in a reduced level of safety. When connecting devices, the system shall be evaluated in end use application to ensure compliance to medical device standard 60601-1.

⚠ CAUTION

A safety feature of this product includes protection against overheating caused by excessive or extended periods of operation. Depending on the duration, this includes multiple or repeated adjustments or the use of multiple functions at once.

To ensure trouble free operation, **ALWAYS** allow a slight pause between multiple adjustments. **DO NOT** exceed the maximum continuous mode of operation. Refer to page 16 for complete technical specifications.

If thermal protection activation should occur, the bed will not respond to staff commands from any control location and the CB09 control box will need to be service and/or replaced.

⚠ WARNING

Always keep the footboard installed and locked when a patient is left unattended. When removing the footboard, if the mating spring-return connector cover on the bed is damaged or does not return to properly to cover the terminals, reinstall and lock the footboard then have the bed serviced. Never touch an exposed terminal and the patient simultaneously.

1.7.1 Battery Back-up

Battery Location

All Spirit™ beds are equipped with a rechargeable, back-up battery. The battery is located under the knee section of the mattress deck mounted to the bed frame cross member of the patient left side of the bed on all Spirit™ beds. Refer to pages 128 and 130 respectively for battery location.

Battery Charging and Operation Characteristics

The battery is continuously charged when connected to the CB10 or CB11 control box and the bed is plugged into an AC power outlet. When the bed is unplugged from the AC power outlet, the bed is powered by the battery. Refer to pages 34 to ensure proper battery cable connection.

The footboard staff control on Spirit™ beds has an integrated power status indicator. When the ATTN light is flashing, the battery requires inspection. Refer to pages 55 and 56 for power status indication.

The battery is maintenance free, however battery life is not indefinite, and thus semi-annual inspection is required to verify operation. Refer to page 114 for details. In the event the battery is deemed to be faulty, does not hold a charge, will not operate the functions of the bed while the bed is disconnected (unplugged) from the AC power outlet, or if the battery case or mounting hardware has been damaged in any way, replace the battery.

⚠ WARNING

After connecting a battery to the CB10 or CB11 control box, the bed **MUST** be plugged into an AC power outlet to energize the battery circuit and enable bed operation under battery power. This **MUST** be performed regardless of the battery charge condition.

⚠ WARNING

Emergency bed functions cannot be guaranteed under abnormal operating conditions.

ALWAYS be aware of the power status indicator and take appropriate action when the ATTN light is flashing. **ALWAYS** perform periodic battery inspection.

⚠ WARNING

Potential **ELECTROCUTION, EXPLOSION,** and/or **FIRE HAZARD**

These potential hazards could occur resulting in injury or loss of life in addition to equipment damage can occur if battery is replaced with components other than those approved for use on the Spirit™ bed by CHG Hospital Beds.

⚠ WARNING

EXPLOSION or FIRE HAZARD

DO NOT expose the battery to heat. Keep away from flames and sparks

⚠ WARNING

DO NOT connect battery to CB09 control box if your bed is also equipped with a CB10 or CB11 control box. The battery may overheat causing it to swell, leak acid, and/or explode.

If your bed has a CB10 or CB11 control box, the DC jack in the CB09 control box is no longer configured as a charging circuit for the battery. The DC jack has been modified to provide constant 24VDC power for the CB10 control box.

Connect battery only to CB10 or CB11 control box. If you have to replace your CB09 control box call CHG Hospital Beds' Customer Service to ensure that you have the correct version of this component at (519) 963-4010 or Toll Free 1-866-516-5446.

⚠ WARNING

If a sulphuric odour (smells like a burnt match) is detected, or if any residual leakage is found on or around the area of the battery, **ALWAYS** replace the battery immediately.

Battery is **NOT** a serviceable item. **DO NOT** attempt to open the battery. In the event that the battery enclosure has been compromised, avoid contact with internal components. Internal components are primarily lead oxide and electrolyte (sulphuric acid).

In the event a person is exposed to sulphuric acid, flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and seek medical attention if necessary. An eye wash station and emergency shower should be readily available. If swallowed, give large amounts of water. **DO NOT** induce vomiting. Seek medical attention immediately.

Lead-acid batteries can be **HAZARDOUS** to your health. Short-term exposure – Sulphuric acid may cause irritation of eyes, nose and throat. Prolonged contact may cause severe burns. Long term exposure – repeated contact causes irritation and skin burns. Repeated exposure to mist may cause erosion of teeth, chronic eye irritation and/or chronic inflammation of the nose, throat, and bronchial tubes.

If a sulphuric acid spill is found under the bed, dilute the spill cautiously with five to six volumes of water and gradually neutralize with sodium bicarbonate, soda ash or lime. When exposure level is not known, wear NIOSH approved positive pressure self-contained breathing apparatus. Reference North American Emergency Response Guidebook #154 (or equivalent current documentation). Be sure to wear acid resistant gloves, safety glasses, and acid resistant clothing when cleaning a sulphuric acid spill.

⚠ CAUTION

ALWAYS unplug the bed from the AC power outlet before connecting or disconnecting the battery.

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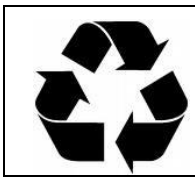


⚠ CAUTION

ALWAYS dispose of faulty batteries or batteries that have reached the end of their service life according to local laws and regulations. Lead acid batteries are completely recyclable.

1.7.2 Grounding

This electric bed must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current, thereby reducing the risk of electric shock.

This product is equipped with a cord having an equipment-grounding conductor and a grounded plug. The plug must be inserted into an appropriate AC power outlet that is properly installed and grounded in accordance with all local electrical codes and ordinances.

⚠ DANGER

Improper connection of the equipment-grounding conductor can result in electrocution. Check with a qualified electrician or service person if you are doubtful that the electrical outlet is properly grounded.

DO NOT modify the three prong plug provided. If it will not fit into the AC power outlet, have a proper AC power outlet installed by a qualified electrician.

Grounding reliability can only be achieved when bed is connected to an equivalent receptacle marked "**HOSPITAL ONLY**" or "**HOSPITAL GRADE**".

1.8 Important Mechanical Precautions

⚠ WARNING

Safe Working Load of Bed

227 kg (500 lbs)

DO NOT overload the bed. The total combined weight of patients, visitors, mattress, additional equipment/accessories, and bedding **MUST NOT** exceed 227 kg (500 lbs)

⚠ WARNING

Maximum Patient Weight

162 kg (357 lbs)

Patient weight is based on a typical bed setup (20 kg mattress + 45 kg additional accessories)

⚠ WARNING

Safe Working Load of Siderails

80 kg (176 lbs)

DO NOT exceed a 80 kg (176 lbs) load on any siderail

⚠ WARNING

DO NOT use headboards or footboards from other manufacturers on any Spirit™ bed. Spirit™ beds are specifically designed and manufactured for use in conjunction with CHG Hospital Beds accessories. Accessories designed by other manufacturers have not been tested by CHG Hospital Beds and are not recommended for use on Spirit™ beds.

On Spirit™ beds, **ALWAYS** ensure that the headboard and footboard brackets are properly attached to the frame before use.

⚠ WARNING

Possible **PINCHING HAZARD** exists when bed is configured with manual CPR release. Powered bed mechanisms can cause **SERIOUS INJURY**.

ONLY trained healthcare practitioners shall operate the manual CPR release in the event of a medical emergency. **ONLY** operate the Electronic CPR button and/or the manual CPR release with persons clear of mechanisms.

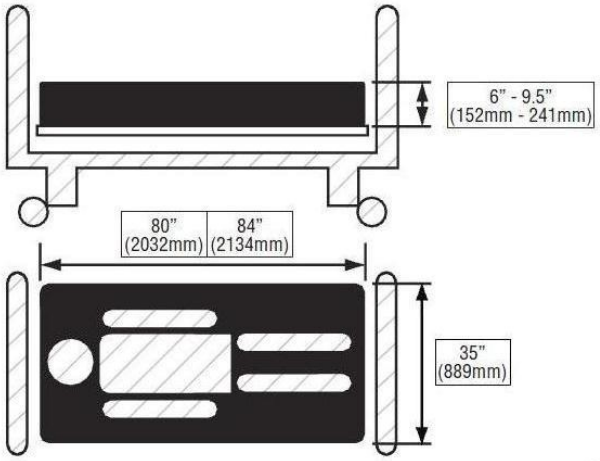
1.9 Mattress Specifications

A mattress is not included with the Spirit™ bed. A CHG Hospital Beds mattress is recommended.

Any mattress that is used on the Spirit™ bed must suitably fit on the mattress deck and fit snugly within the confines of the 4 corner mattress keepers having a width of 35" (889mm).

The length and width of the mattress **MUST** suitably fit on the mattress deck in either the 80" (2032 mm) or 84" (2134 mm) configuration.

DO NOT use the bed without a mattress having a thickness of at least 6" (152 mm) but not more than 9-1/2" (241 mm).



LENGTH:	OR	80 inch (2032mm)
		84 inch (2134 mm)
WIDTH:		35 inch (889 mm)
THICKNESS:		6 inch (152 mm)
WEIGHT:	80 inch (with Bolsters)	24 lbs (10.9 kg)
	84 inch (with Bolsters)	28 lbs (12.7 kg)

⚠ WARNING

The mattress **MUST** entirely rest upon the mattress deck. The mattress **MUST** fit snugly within the 4 corner mattress keepers.

Incompatible mattresses can create hazards. **DO NOT** use this bed without a special mattress specifically designed to bend and conform to the shape of the bed. **DO NOT** use water filled or gel filled mattress on this bed.

⚠ WARNING

Possible patient **ENTRAPMENT Hazard** or **FALL RISK** if using non-specified mattress.

Patient entrapment may result in injury or death. Use only a mattress of recommended specifications with this bed. CHG Hospital Beds will not be responsible for any injury to patient and/or staff and/or damage to bed that may result with use of non-specified mattress.

⚠ WARNING

CHG Hospital Beds recommends that the customer perform a thorough patient assessment to determine if the bed system and mattress selection is appropriate for the patient on the basis of their clinical needs, fall risk, and mental capacity. CHG Hospital Beds is of the belief that to ensure maximum patient safety, there is simply no substitute for frequent patient monitoring by qualified healthcare practitioners. CHG Hospital Beds also recommends that the customer conduct and document a patient entrapment risk assessment for every mattress combination that is intended for use on the Spirit™ bed in both the flat (horizontal) and articulated positions to identify and address any exposure to areas of potential patient entrapment and/or fall risk as part of a comprehensive and proactive bed safety program.

⚠ WARNING

A potential increase in **FALL RISK** may result when using the Spirit™ bed with a mattress having a thickness greater than 6" (152mm). All patients should be monitored closely and CHG Hospital Beds recommends that when a patient is to be left unattended the bed should **ALWAYS** be lowered to the lowest position.

1.10 General Precautions

⚠ WARNING

Close supervision by trained healthcare practitioners is **ALWAYS** necessary when this product is used by or near children and/or people with disabilities.

DO NOT let any person climb/crawl underneath the bed, between the bed legs and/or the raised bed frame components at any time.

⚠ WARNING

DO NOT use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as owner's manuals, service manuals, or instruction sheets supplied with this product or optional equipment.

If you are unable to understand the warnings, cautions or instructions contact a healthcare professional, your Spirit™ bed dealer, or a service technician, specifically trained to service CHG Hospital Beds Spirit™ beds, before attempting to install and/or use this equipment, otherwise injury to the patient and/or staff and equipment damage may occur.

⚠ WARNING

DO NOT drop the bed. **DO NOT** allow patients to fall onto and/or jump on the bed.

These types of activity can cause impact loads that can permanently damage the actuators and/or other bed components resulting in an inoperable bed.

In the case of an inoperable bed due to a damaged actuator, replace the actuator immediately. If left unattended, a damaged actuator could result in injury to the patient and/or staff and additional equipment damage.

⚠ WARNING

Check all parts for shipping damage and test bed to confirm proper operation before putting the bed into active service.

DO NOT use bed if any component damage is discovered or a service technician suspects that damage has occurred. A damaged bed may expose staff and/or patients to unforeseen safety hazards. Contact your Spirit™ bed dealer or a service technician, specifically trained to service CHG Hospital Beds Spirit™ beds, for further instruction.

Before the bed is returned to active service after any adjustment, repair, and/or service have been performed, **ALWAYS** ensure that all attaching hardware is tightened securely.

⚠ WARNING

NEVER allow patients to use trapeze or traction units as a total individual weight support.

Traction units are to be only used for immobilizing a patient in various, therapeutic, traction set ups and/or positions that have been clinically prescribed by a trained healthcare practitioner. Trapeze units (lifting poles) are to be only used to assist patient when repositioning and/or transferring into or out of the bed.

⚠ WARNING

Unauthorized modifications to the equipment can result in **HAZARDS**. **DO NOT** modify the Spirit™ bed and/or any accessories without written authorization from CHG Hospital Beds.

Use only authorized CHG Hospital Beds replacement parts and/or accessories otherwise the warranty is void. CHG Hospital Beds will not be responsible for any injury to patient and/or staff and/or damage to bed that may result.

⚠ WARNING

ALWAYS keep all moving parts, including the main frame of the bed, the bed legs, the mattress deck, and all actuator shafts free of obstructions (i.e.: window sills, radiators, bed side cabinets, under bed tables/trays, chair rails, consoles, blankets/bed linens, heating blankets/pads, tubing, wiring, etc., and other types of products using electric cords which may get tangled around the bed, siderails or legs) during bed operation. **NEVER** store anything under the bed.

ALWAYS take the necessary precautions to avoid squeezing/shearing of routed cables from other equipment in the moving parts of the bed.

⚠ CAUTION

DO NOT stand on the bed or concentrate weight on any particular sections of the mattress deck. Patient body weight should be evenly distributed over the surface of the bed. **DO NOT** lay, sit or lean in such a way that the patient's entire body weight is placed only on elevated head or foot sections of the bed. This includes situation when assisting the patient to reposition and/or transfer into or out of the bed.

Ensure all hinges of the mattress deck sections are properly aligned before raising head or knee sections. All four sections of the mattress deck can be detached for thorough cleaning, sanitization, and maintenance. Refer to page 120 for instructions.

⚠ CAUTION

To ensure the accuracy of the scale and alarms, keep the area around and/or under the bed open and free of obstructions and/or equipment.

⚠ CAUTION

A patient hoist can be used with this bed however due to the ultra-low height, it has limited underbed clearance therefore the bed must be partially raised to allow the patient hoist to roll freely under it. Failure to raise the bed may result in damage to the bed when patient hoists are used.

⚠ CAUTION

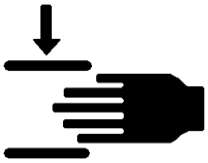
The Footboard is **NOT** designed for use as a patient therapy device. **NEVER** use the Footboard as a resistance device. Any undue forces, bending or flexing of the footboard may permanently damage the footboard and any associated electrical connections.

⚠ CAUTION

When bed is configured with manual CPR release, **ONLY** trained healthcare practitioners shall operate the manual CPR release in the event of a medical emergency. **ONLY** operate the CPR button and/or manual CPR release with persons clear of mechanisms. **PRESS and HOLD** the CPR button to lower the head (back rest) and knee sections to a flat position.

To interrupt the CPR function, simply release the CPR button. Refer to device manual for additional safety precautions.

To avoid unintended CPR release keep area around CPR handle clear of obstructions.



⚠ CAUTION

Potential **PINCHING HAZARD** exists between articulating deck sections and bed frame. Moving parts and/or powered bed mechanisms can cause **SERIOUS INJURY**. Only operate bed with persons clear of all mechanisms. **ALWAYS** keep hands clear of moving bed parts.

Ensure that the backrest remains free from all obstructions. Obstructions could impair normal bed operation and/or cause component damage and/or injury. If an obstruction is detected elevate the backrest to clear obstruction before attempting to remove any obstruction.

⚠ CAUTION

The Spirit™ bed has been supplied from an environmentally aware manufacturer that complies with the Waste of Electrical and Electronic Equipment (WEEE) directive 2002/96/CE. The Spirit™ bed may contain substances that could be harmful to the environment if disposed of in places (landfills, etc.) that are not appropriate according to legislation. Please be environmentally responsible and recycle this bed through your recycling facility when the bed has reached the end of its service life.

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1.11 Standard & Optional Features

Feature	Spirit Plus™	Spirit Select™
5” (125 mm) Casters	Standard	Standard
6” (150 mm) Casters	Optional	Optional
4 Corner Mattress Keepers	Standard	Standard
6 Patient Restraint Loops	Standard	Standard
2 Drainage Bag Holders	Standard	Standard
Wood Laminate Head/Footboards	Optional	Optional
Patient Handheld Control (Pendant)	Optional	Optional
Pillow Speaker Ready	-	Optional
Moulded Plastic Head/Footboards	Standard	Standard
Moulded Plastic Siderails c/w Integrated Staff & Patient Controls, and Nurse Call	Standard	Standard
Enhanced Footboard Staff Controls with Integrated Patient Weight Scale Display & Bed Exit Controls	-	Standard
Integrated Patient Weight Scale & Bed Exit System	-	Standard
Manual CPR Release	-	Optional
Bed Exit Alarm Pad & External Alarm Unit	Optional	-
Underbed Obstruction Sensing	Optional	Optional
Underbed Lighting	Optional	Standard
Auxiliary AC Power Outlet Socket	Optional	Optional
4” (102mm) “Easy Bed” Extension System	Optional	Optional
2 Position Vascular Foot Bail	Optional	Optional
Moulded Plastic High Siderails c/w Integrated Staff, Patient Controls, and Nurse Call Feature	Optional	Optional
Mental Health Package c/w Tamperproof Fasteners, Deck Section Connectors, Non-Removable Head and Footboards, Removable Brake Pedal, and Shortened Power Supply Cord	Optional*	Optional*

⚠ WARNING

***A Spirit™ bed outfitted with the optional Mental Health package is a customer requested bed configuration that is intended to perform a specialized function and has several unique differences from regular production beds. The head and footboards and deck sections may not be removable without tools. The head and footboards and rail panels may not have any openings. The brake pedal may be removable. The power cord may also be shorter.

* A Spirit™ bed outfitted with the Mental Health package is **NOT** intended for normal unit use.

1.12 Siderail Assemblies

Your Spirit™ bed may be equipped with one of the following types of siderail assemblies:		
Siderail Types	**Spirit Plus™**	**Spirit Select™**
Regular Height Plastic Siderails	Standard	Standard
High Plastic Siderails	Optional	Optional
High "Filled-in" Plastic Siderails	Optional	Optional
Long High Head Plastic Siderails	Optional	Optional
Long High Head "Filled-in" Plastic Siderails	Optional	Optional

1.13 Optional Accessories

Accessory	Mass*	Spirit Plus™	Spirit Select™
Bed Exit Alarm Pad & External Alarm Unit	n/a**	A2700-PLUS	-
4" (102 mm) Bolt-on Bed Extension Kit	n/a**	A2500	A2500
4" (102 mm) "Easy Bed" Extension Kit	22 lbs (9.9 kg)	A2508	A2508
4" Bolster	2 lbs (0.9 kg)	A2501	A2501
4" Bolster (For "Easy Bed" System)	6 lbs (2.7 kg)	A2503	A2503
2 Position Vascular Foot Bail	n/a**	A2140	A2140
Padded Floor Mat	10 lbs (4.5 kg)	A3321	A3321
Padded Head/Footboard Covers	2 lbs (0.9 kg)	A3201/A3202	A3201/A3203
Padded Regular Height Rail Covers	1 lbs (0.5 kg)	A3210	A3210
Padded High Rail Covers	1 lbs (0.5 kg)	A3215	A3215
CPR Board & Bracket	6 lbs (2.7 kg)	A2101/A2100	A2101/A2100
Mattress Pump & Accessory Hanger	3 lbs (1.4 kg)	A2601	A2601
Removable Universal Trapeze Adapter	13 lbs (5.9 kg)	A2404	A2404
Fixed IV Pole	3 lbs (1.4 kg)	A2320	A2320
Collapsible IV Pole and Brackets	6 lbs (2.7 kg)	A2315	A2315
Horizontal Oxygen Tank Holder	7 lbs (3.2 kg)	A2211	A2211
Vertical Oxygen Tank Holder	2 lbs (0.9 kg)	A2210	A2210

**All masses are nominal and have approximate manufacturing tolerances of ± ¼ lbs (± .11 kg)*
***Accessory, once installed onto and/or fastened to bed is no longer considered detachable*

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1.14 Mass of Detachable Components

Detachable Component	Mass*	
	Headboard	Footboard
Spirit Plus™ Wood Laminate Head/Footboard	21 lbs (9.5 kg)	21 lbs (9.5 kg)
Spirit Plus™ Moulded Plastic Head/Footboard	6 lbs (2.7 kg)	6 lbs (2.7 kg)
Spirit Select™ Wood Laminate Head/Footboard	21 lbs (9.5 kg)	22 lbs (10.0 kg)
Spirit Select™ Moulded Plastic Head/Footboard	6 lbs (2.7 kg)	7 lbs (3.2 kg)

**All masses are nominal and have approximate manufacturing tolerances of ± ¼ lbs (± .11 kg)*

⚠ CAUTION

NEVER attempt to install a headboard at the foot end of the bed and vice versa. **ALWAYS** ensure that the footboard is installed in the proper orientation. The footboard staff control **MUST ALWAYS** face away from the patient. **NEVER** drop a footboard. A damaged footboard staff control and/or footboard staff control connector could result in the inability to operate the bed from this control point.

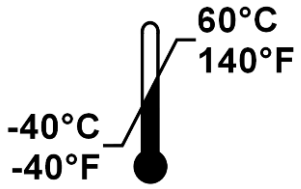
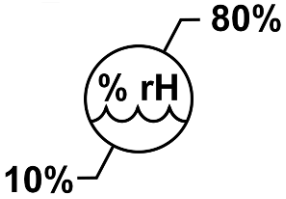
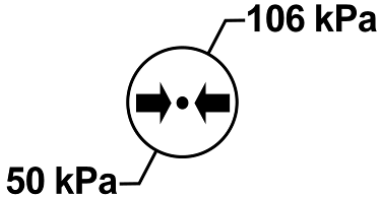
⚠ CAUTION

On Spirit™ beds configured with wood laminate head/footboards, the footboard cable **MUST** be disconnected before the footboard can be removed from the bed. Failure to disconnect the footboard cable prior to footboard removal may result in component damage and/or the inability to operate the bed from the footboard staff control.

1.15 Applied Parts

CHG Hospital Beds considers that the following are the Applied Parts of the Spirit™ bed: any head/footboard assemblies, head/footboard bracket assemblies, any siderail assemblies, all sections of the mattress support platform (deck) and associated mattress keepers, any CHG Hospital Beds' supplied pendant and/or pillow speaker (if equipped), any CHG Hospital Beds supplied (Prevention Surface) mattress (if equipped).

1.16 Storage & Transport

Environmental Conditions for Storage and Transport		
		
Ambient Temperature Range	Ambient Humidity Range (Non Condensing)	Atmospheric Pressure Range

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During extended periods of disconnect from an AC power outlet, the battery is susceptible to permanent damage caused by being deep discharged. All Spirit™ beds are equipped with a disconnect feature which automatically disengages the battery from the battery circuit to prevent damage from being deep discharged. There is no need to disconnect the battery when a Spirit™ bed is going to be put into storage, however, the CB10 or CB11 control box will continue to draw power until the battery voltage has hit the 18V threshold which triggers the automatic circuit disconnection.

IMPORTANT: A battery voltage of 18V is insufficient to operate the bed. Reconnect bed to an AC power outlet as soon as possible to and allow battery to charge for a period of 24hr to ensure that the bed will reliably operate on battery power when needed.

IMPORTANT: To conserve battery life during storage and transport, disconnect the battery from the CB10 or CB11 control box. On Spirit™ beds equipped with CB10 control boxes, even if a battery was fully charged when it was unplugged from the control box, the bed will not operate on battery power if the battery is simply reconnected to the control box. The bed must be connected to an AC power outlet to energize the battery circuit. This will enable bed operation on battery power. On Spirit™ beds equipped with CB11 control boxes, the bed will become operational when the battery is reconnected.

⚠ CAUTION

DO NOT re-use any original packaging material to transport the bed.

ALWAYS transport the bed by rolling the bed on its casters.

ALWAYS ensure the Central "Lock & Steer" system is in the "BRAKE" position before attempting to lift/lower bed. **ALWAYS** ensure that the Central "Lock & Steer" system is in the "BRAKE" position after the bed is loaded onto transportation vehicle. Use additional strapping or tie downs as necessary to ensure the bed does not move while in transport.

DO NOT use the siderails as a means of mechanically restraining the bed during transportation and/or storage. **DO NOT** use the siderails as lifting points for the bed during transportation and/or storage.

NOTE:	CHG Hospital Beds recommends that following any storage and/or transportation in extreme temperature conditions that you allow the bed to acclimatize for a period of at least 24 hours before the bed is operated/powered up and/or put into service.

1.17 Ultra-Low Feature

The Spirit™ product line is a family of ultra-low beds, designed to reduce patient injury due to falls out of bed. Therefore, in an effort to reduce patient injury, CHG Hospital Beds recommends that you **ALWAYS** lower the bed completely to the lowest position before leaving a patient unattended.

When configuring a bed with no rails:

Regardless of the purpose for which bed rails are being used or considered, a decision to utilize or remove those in current use should occur within the framework of an individual patient assessment. For Further information refer to the FDA's website at http:/www.fda.gov/cdrh/beds/ for Clinical Guidance for the Assessment and Implementation of Bed Rails in Hospital, Long Term Care Facilities, and Home Care Settings.

⚠ CAUTION

When beds are configured with no side rails: Keep the bed in the lowest position with the wheels locked and patient lock-outs on as prescribed by the care plan when occupied, adjusting the level for activities such as administering care or for patient transfers in/out of bed. Transport patients as prescribed by the care plan.

Available floor mats, mattresses with side bolsters, bed exit alarm, and nurse call can be used in conjunction with the low bed based on the patient assessment and care plan.

Section 2:

Set-Up Instructions

2.1 Unpacking Instructions

Upon delivery of the bed, remove all cardboard, Styrofoam, crates, or other packaging material. Follow these instructions to unpack and set up the bed.

⚠ CAUTION

Equipment DAMAGE may result from improper plastic tie wrap removal.

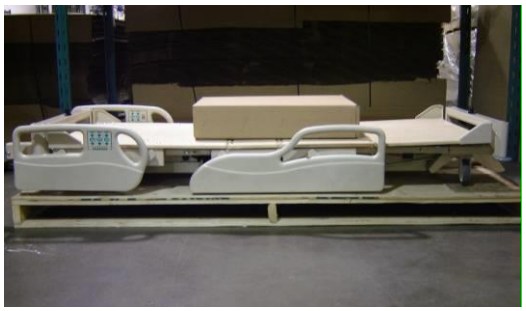
DO NOT cut any trimmed plastic tie wraps. Trimmed plastic tie wraps are permanent features on the Spirit™ bed.

2.1.1 Delivery

If your Spirit™ bed is shipped standing on-end, use three people to carefully lower it to the floor. Refer to page 33 for safe lowering instructions.

DO NOT attempt to lower the bed without assistance.

Once the bed is lowered, you may begin the set-up of your Spirit™ bed.



If your Spirit™ bed is shipped on a pallet or in a crate, roll the bed onto the floor and begin the set-up procedure.

For the purpose of clarity, the packaging has been removed from this bed.

⚠ WARNING

BED IS TOP HEAVY!!!

Bed may **TIP OVER** when positioned upright during storage and/or transport

⚠ WARNING

BED IS HEAVY!!!

Improper handling may result in serious injury to personnel and/or damage to bed.

Use proper lifting techniques when lifting or lowering bed.

DO NOT attempt to lower bed without assistance. Refer to page 33 for safe lowering instructions.

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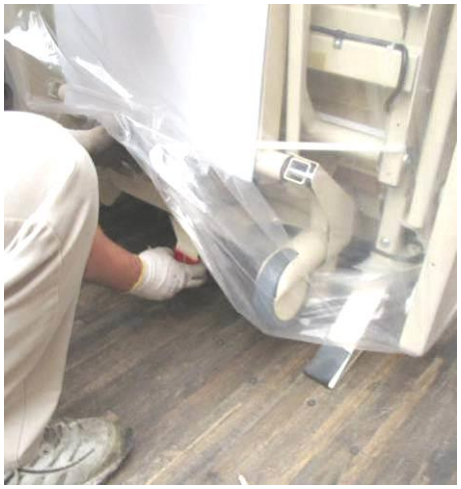
2.1.2 Lowering the Bed

1. Beds in typical position when being transported or stored.

IMPORTANT: BED IS HEAVY!!! Never attempt to lower the bed without assistance. CHG Hospital Beds recommends that the bed is most safely lowered with 3 people as shown in the following steps.

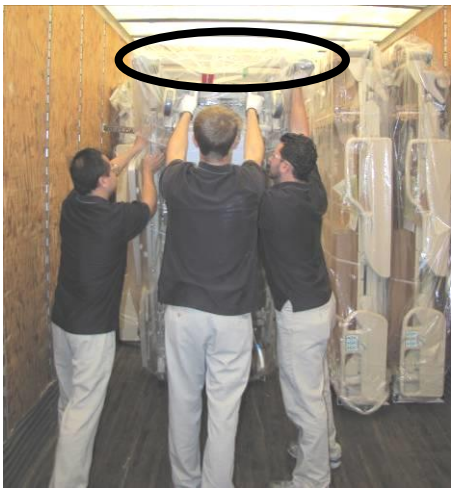
2. Use the corner of the shipping stand (bolted to lower end of the bed) and the siderails (must be strapped to the bed) to pivot the bed into a position that will allow you to lower the bed.

IMPORTANT: Maintain your hold on the bed. The bed will fall if not held upright at this point.



3. Ensure the brake is engaged before attempting to lower/lift the bed. Attempt to rotate a caster to confirm that the brake has been engaged.

IMPORTANT: Prior to lowering the bed, ensure that you have adequate room. At least 8 feet is required to lower the bed from the upright transportation/storage position.



4. Firmly grasp the bed frame at the foot end of the bed (circled). Begin lowering the bed by gently pulling the bed from the upright position and slowing walking backwards.

5. Continue lowering the bed by slowing walking backwards. It may be necessary to reposition your grip to allow further lowering of the bed.

IMPORTANT: Communicate with the other people before adjusting your grip!

6. At this point, maintain your grip, lock your arms, and lower the bed to the floor by bending your knees.

IMPORTANT: Do not drop bed!

⚠ WARNING

DO NOT drop the bed when lowering during storage and/or transport. If the bed is dropped, permanent damage to bed components may occur. This may result in an inoperable bed or a bed with severely impaired operation.

DO NOT use a bed that has been dropped. Non obvious damage may have occurred that may expose staff and/or patients to unforeseen safety hazards.

The Central "Lock & Steer" system **MUST** be in the **"BRAKE"** position prior to attempting to lower/lift the bed. If the brake has not been engaged, the bed may roll away from personnel while attempting to lower/lift the bed. This may result in a very rapid descent and/or unexpected bed motion that may cause severe **INJURY** to personnel lowering/lifting bed and/or permanent **DAMAGE** to bed.

Before lowering/lifting bed, **ALWAYS** attempt to roll/rotate a caster to confirm that the brake is engaged.

DO NOT use the siderails as lifting/lowering points for the bed.

DO NOT use the siderails as a means of mechanically restraining the bed during transportation and/or storage.

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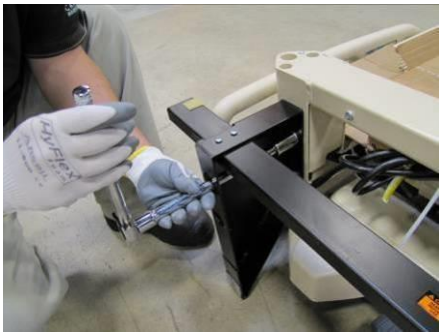
2.2 Set-Up of the Spirit™ Bed

1. Cut packaging straps holding the headboard and footboard box and other packaging materials to the bed. Cut all untrimmed plastic tie wraps. Discard all packaging materials.

DO NOT cut any trimmed plastic tie wraps. Trimmed plastic tie wraps are permanent features on all Spirit™ beds.



1. Using a 3/4 SAE socket, 9" extension, and ratchet remove the 4 bolts holding the shipping bed stand onto the headboard bracket.

2. Lift shipping bed stand away from headboard bracket. Discard shipping bed stand and fasteners.

3. Remove the plastic tie wrap around the main power supply cord bundle.

   Exercise caution to ensure that you do not cut into or otherwise damage the of the power supply cord.

4. Connect the bed to mains A/C power either directly into a properly grounded wall outlet or into a suitable extension cord connected to a properly grounded wall outlet.

5. Cut plastic tie wrap holding head rail assembly.

6. Rotate both head rail assemblies and lock/latch in the UP position. Pull out all packaging tucked in between the rail arms, panel, and bracket. Discard all packaging materials.

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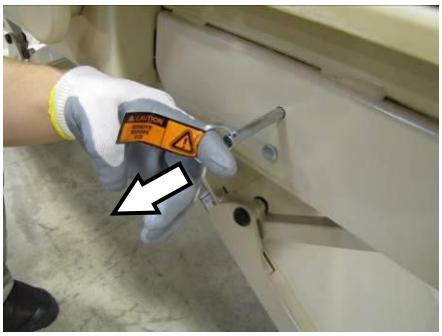
<table>
<tr><td> </td><td> </td><td> </td></tr>
<tr><td>7. Reach under bed and cut packaging strap wrapped around head-end leg assembly and the frame.</td><td>8. If your bed is equipped with the optional obstruction sensors, pull out protective shipping cover installed over the lower leg obstruction sensor. Discard protective shipping cover.</td><td>9. Cut packaging strap wrapped around foot rail assemblies and the frame.</td></tr>
<tr><td> </td><td> </td><td> </td></tr>
<tr><td>10. Reach under bed and cut packaging strap wrapped around foot-end leg assembly and the frame.</td><td>11. If your bed is equipped with the optional obstruction sensors, pull out protective shipping cover installed over the lower leg obstruction sensor. Discard protective shipping cover.</td><td>12. Press the UP button on either siderail staff controls and elevate bed to a comfortable working height.</td></tr>
<tr><td> </td><td> </td><td>  </td></tr>
<tr><td>13. Rotate both foot rail assemblies and lock/latch in the UP position. Pull out all packaging tucked in between the rail arms, panel, and bracket. Discard all packaging materials.</td><td colspan="2">14. On Spirit Select beds there are two shipping pins located behind the foot rail assemblies.

IMPORTANT: Both of these shipping pins MUST be removed for proper scale function.

15. Removed both shipping pins by pulling straight out. Discard both shipping pins.</td></tr>
</table>

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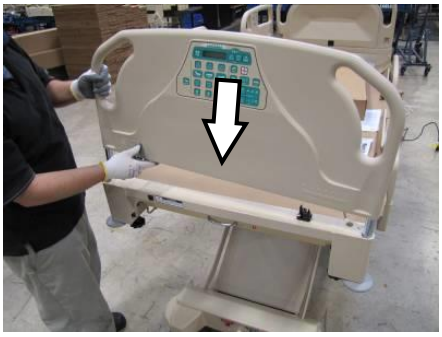
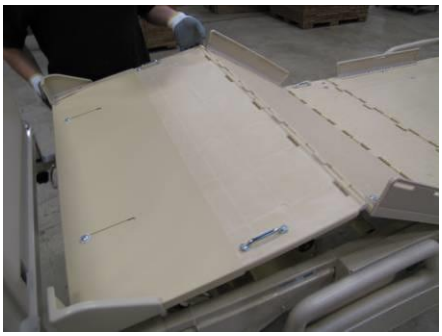
16. Unpack the headboard and footboard from their separate packaging box.	17. Lay the headboard and footboard on top of their separate packaging box. There should also be a small bag of 4 black plastic barbed clips in the box. Other items may be shipped inside this box. Ensure box is empty then discard box.	18. Place the headboard into the headboard bracket assembly. Electrical connector is not live. It is used only as an indexing feature to ensure correct headboard installation orientation.
		
19. Place the footboard into the footboard bracket assembly. Electrical connection is made when the footboard is inserted into bracket assembly; footboard becomes inactive when removed.	20. Install both footboard lanyard pins into the holes in the footboard bracket.	21. Install 4 black plastic barbed clips (from step 17) into the 4 holes on the headboard bracket that the shipping stand was attached to.
		
22. Remove manual from cardboard coving mattress deck. **IMPORTANT: DO NOT** discard manual. Thoroughly read manual before using bed. Store manual in a readily accessible location for future reference.	23. Removed cardboard covering mattress deck. Discard cardboard.	24. Lift the knee/foot sections of the mattress deck (as shown above) to gain access the CB10 or CB11 control box.

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25. Continue to lift the knee/foot hinged connection and gently lay the deck sections back as shown above. The CB10 or CB11 control box is now accessible.

26. Connect the battery cable to the side DC jack of the CB10 or CB11 control box.

IMPORTANT: This will ensure the on-board battery remains fully charged and will be ready for use in the event that mains AC power is disrupted.

27. If your bed is equipped with the optional pendant, unscrew cap on desired pendant port (either side of bed). Align arrows and insert pendant connector into pendant port. Slide up and screw on threaded retaining collar attached to the pendant.

The bed **MUST** be initialized before it can be used.

28. Using the BED DOWN button fully lower the bed using any control location (footboard staff control, siderail staff control, rail patient, or pendant).

IMPORTANT: Ensure that the power cord is free of moving bed parts.

29. Once the bed is fully lowered and all bed motion has automatically stopped **CONTINUE to HOLD** the BED DOWN button until the two tone audible indicator sounds. Continue to Hold bed down for an additional 20 seconds to complete the Soft Reset.

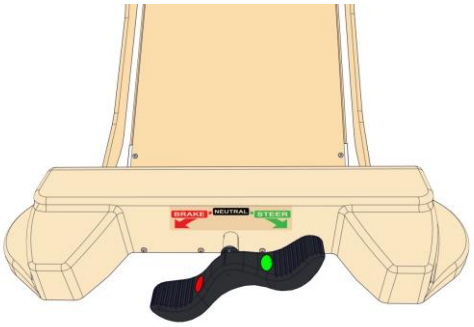
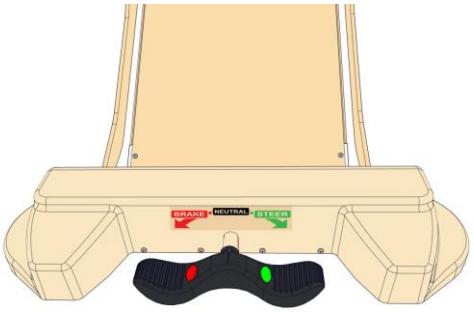
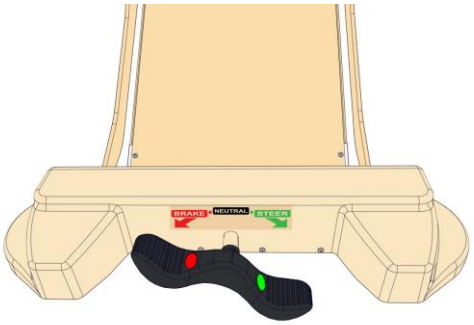
This process will synchronize the hi-lo actuators so that the bed will perform properly

30. Your new Spirit™ bed is now ready for use.

Section 3:

Bed Operation

3.1 Central "Lock & Steer" System

Mode	Caster Functionality	Pedal Position
"BRAKE" Mode used to stabilize the bed from shifting. This mode prevents the bed from moving forwards, backwards or sideways.	Casters **DO NOT** swivel or roll	
"NEUTRAL" Mode used only to manoeuvre the bed in a tight area. This mode allows the bed to move forwards, backwards or sideways.	All casters swivel and roll	
"STEER" Mode used when attempting to steer the bed in a desired direction. All caster wheels can still rotate, enabling the bed to move forwards or backwards.	Head end casters swivel Foot end casters **DO NOT** swivel All casters roll	

⚠ WARNING

Unintended bed movement may occur if bed is left in either of the two mobilized positions; "STEER" or "NEUTRAL".

NEVER leave the bed unattended in either the "STEER" or "NEUTRAL" positions.

ALWARYS engage the "BRAKE" when leaving a patient unattended.

DO NOT attempt to move the bed until the "BRAKE" has been released.

⚠ WARNING

When transferring into or out of the bed, **ALWAYS** ensure that the "BRAKE" is engaged (casters are locked). Inspect the caster locks for correct locking action before actual use.

Even with the "BRAKE" properly engaged (caster properly locked), some flooring surfaces such as tile or wood will allow the bed to move under some conditions. Bed use on surfaces such as these **MUST** be evaluated by the healthcare facility and deemed safe before the bed is put into active service.

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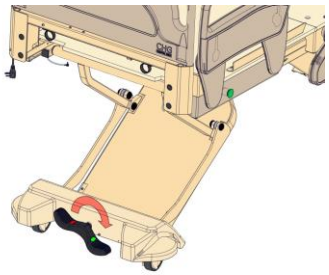
3.1.1 Bed Mobilization & Stabilization

Bed Mobilization

The bed is mobile when the Central "Lock & Steer" pedal is in either the "NEUTRAL" or "STEER" position. Use either of these two pedal positions depending on the situation, when bed mobility is needed.

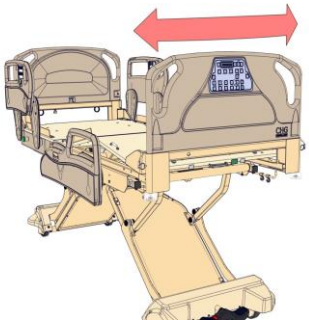
Enable "Steer"

Fully depress the right side of the Central "Lock & Steer" pedal at either end of the bed. Pedal actuation mechanism should make an audible engagement when switching between modes.



IMPORTANT: Depending upon the orientation of the castors, it may be necessary to roll the bed sideways, in a back and forth motion, at the foot end of the bed until the steering casters become engaged in the "STEER" mode.

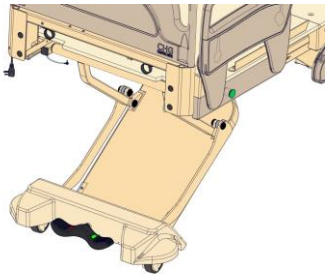
Side-to-Side Motion



Put the bed into "Neutral"

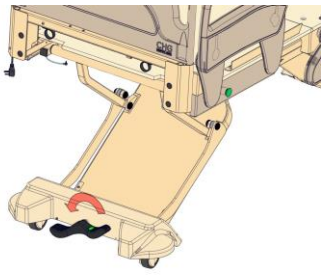
Depress or lift the Central "Lock & Steer" pedal with your foot until the pedal is level. Pedal actuation mechanism should make an audible engagement when switching between modes.

The bed can be put in "NEUTRAL" regardless of caster orientation.



Bed Stabilization

The bed is stable when the Central "Lock & Steer" pedal is in the "BRAKE" position. Use this pedal position whenever the bed is left unattended or when the bed needs to remain stable.



Apply the "BRAKE"

Fully depress the left side of the Central "Lock & Steer" pedal at either end of the bed. Pedal actuation mechanism should make an audible engagement when switching between modes.

The "BRAKE" can be applied regardless of caster orientation.

⚠ WARNING

DO NOT to move the bed until the siderail assemblies have been fully raised/closed and locked/latched in the UP position Refer to page 57 for siderail operation instructions.

NOTE: When the "NEUTRAL" mode is activated properly, the bed should move freely without any unusual noises. If any clicking noises are heard when in the "NEUTRAL" position, stop and ensure that the Central "Lock & Steer" pedal is level. Adjust, if necessary.

3.2 Bed Control

Depending on the Spirit™ bed you purchased, you will have two or three locations for controlling bed functions.

Control Location	Spirit Plus™	Spirit Select™
Patient Handheld Control (Pendant)	Optional	Optional
Footboard Staff Control	Standard	Enhanced
Patient/Staff Siderail Controls	Standard	Standard

3.2.1 Patient Handheld Control (Pendant)

All Spirit™ beds can be configured to connect an optional patient, handheld, 6 function control (pendant).

The pendant offers patient control of basic bed operations:

- Head UP/DOWN,
- Knee/Foot UP/DOWN
- Bed UP/DOWN

Pendant Storage

The pendant can be affixed to the bed using a holder. The pendant slips into the holder for easy location and convenient patient access.

On Spirit™ beds equipped with high siderails:

Install the pendant holder into the opening in either foot rail panel. To permanently affix the holder to the bed, screws the holder to the foot rail panel with the fasteners provided.

Optionally, the pendant can be secured to the bed linens with the linen clip provided. Choose a clip location so that the pendant is within easy reach by the patient.

Pendant Connection

The pendant can be connected on either side of the bed (the connection port is just beneath the seat section of the mattress deck on both sides of the bed).

To relocate the pendant to the opposite side of the bed, first, unscrew the threaded retaining cap then carefully disconnect the jack. Reconnect the pendant control cable to the existing port on the other side of the bed.

Pendant Port Alignment and Care

Ensure that the indexing arrows are aligned to enable connection. Insert pendant cable into pendant port until O-ring seats into pendant port and then thread on retaining cap to retain this connection.

To ensure that the pendant port remains free of dirt and debris, **ALWAYS** cap any pendant port not in use. The threaded cap is simply screwed onto the unused end of the pendant T-cable.

If you relocate the pendant to the other side of the bed, ensure that you cap the unused pendant port.

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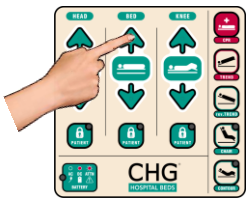
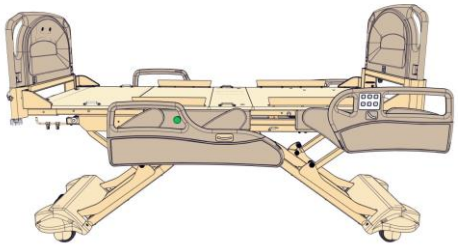
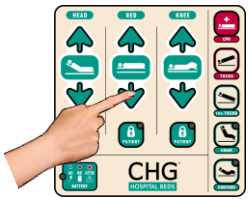
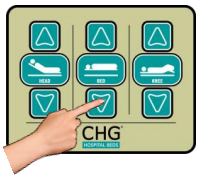
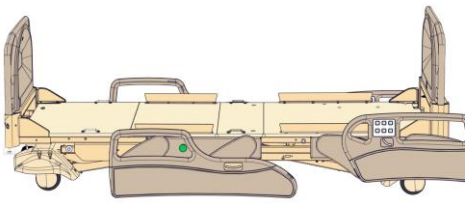
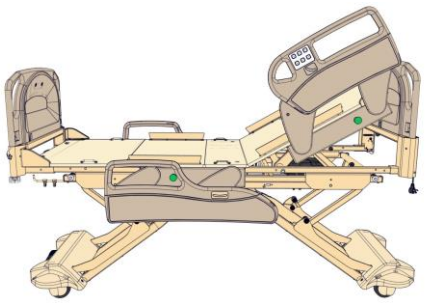
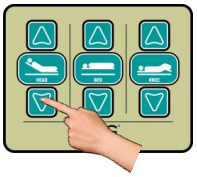
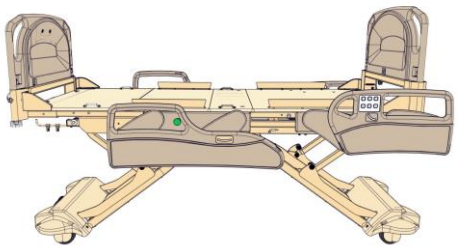
3.3 Bed Positioning

3.3.1 Bed Elevation – HI-LO Operation

To raise the bed, press the BED UP arrow on the footboard staff control, the rail staff controls, or on the pendant. Release the button when the desired elevation has been achieved.	 	 	
To lower the bed, press the BED DOWN arrow on the footboard staff control, the rail staff controls, or on the pendant. Release the button when the desired elevation has been achieved.	 	  	

3.3.2 Head Deck (Back Rest) Elevation - Head Actuator Operation

To raise the head section of the bed, press the HEAD UP arrow on the footboard staff control, the rail staff/patient controls, or on the pendant. Release the button when the desired elevation has been achieved.	 	 	
To lower the head section of the bed, press the HEAD DOWN arrow on the footboard staff control, the rail staff/patient controls, or on the pendant. Release the button when the desired elevation has been achieved.	 	 	

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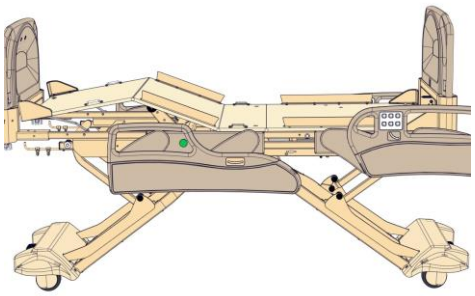
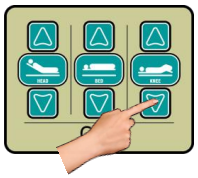
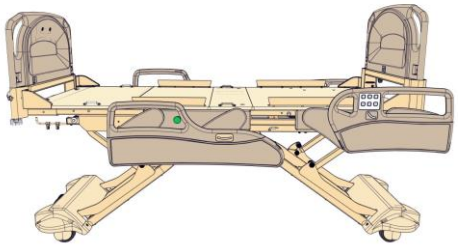
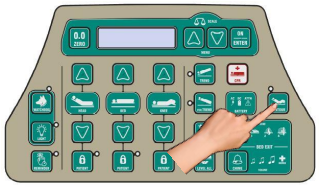
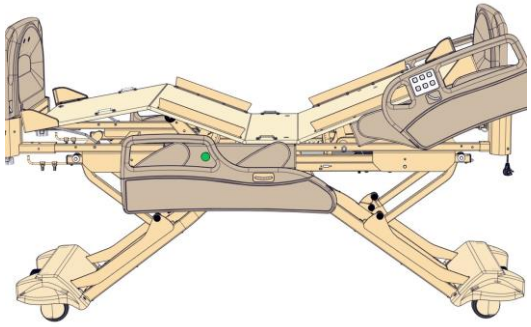
3.3.3 Knee Deck Elevation - Foot Actuator Operation

To raise the knee section of the bed, press the KNEE UP arrow on the footboard staff control, the rail staff/patient controls, or on the pendant. Release the button when the desired elevation has been achieved.	 	 	
To lower the knee section of the bed, press the KNEE DOWN arrow on the footboard staff control, the rail staff/patient controls, or on the pendant. Release the button when the desired elevation has been achieved.	 	 	

3.3.4 Auto Contour Mode

When the head section of the mattress deck (back rest) is elevated, there is often the tendency for the patient to slide towards the foot end of the bed. The Auto Contour Mode helps to prevent this motion. The Auto Contour mode automatically raises/lowers the knee section to, correspondingly, whenever the head section is raised or lowered.

To activate Auto Contour mode, simply press the CONTOUR button. The green LED in the top right corner of the button (Spirit Plus™) or the entire CONTOUR button (Spirit Select™) will illuminate when the Contour mode has been activated. To deactivate Auto Contour mode, simply press the CONTOUR button again. If the CONTOUR button is not illuminated, Auto Contour mode has been deactivated.	 	

NOTE:	Patient lock-out will override Auto Contour if the knee elevation lock-out has been activated.

3.3.5 Chair Positioning

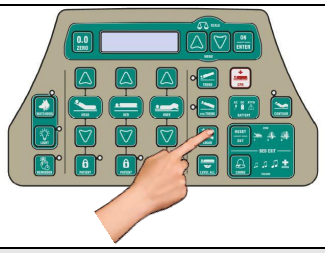
The Chair position allows patient to be placed in an upright seating position.

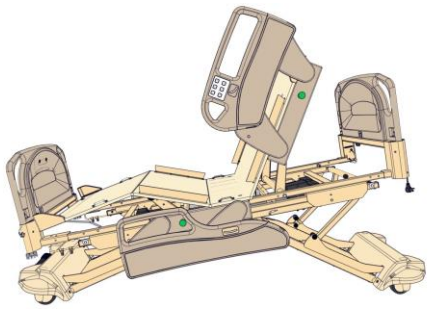
To Achieve Chair Positioning

Simply **press-and-hold** the CHAIR button.

The bed will automatically articulate into the chair position. The green LED in the top right corner of the CHAIR button (Spirit Plus™ beds) will illuminate once the proper reverse Trendelenburg angle has been achieved. The CHAIR button does not illuminate on Spirit Select™.

Release the CHAIR button anytime when the desired chair position has been achieved or the bed will stop automatically once the full chair position has been achieved.





To Return the Bed to a Horizontal Position

On Spirit Plus™ beds:

Simply **press-and-hold** the CHAIR button until the bed is flat and level. The bed will stop automatically.

IMPORTANT: This will only work if the bed is in the full chair position (the green LED in the top right corner of the CHAIR button is illuminated). Either continue to **press-and-hold** the CHAIR button until the full chair position is achieved, then release and **press-and-hold** the CHAIR button until the bed is flat and level or **press-and-hold** the TREND button until the bed is level and **press-and-hold** the CPR button until the bed is flat.

On Spirit Select™ beds:

Simply **press-and-hold** the LEVEL ALL button until the bed is flat and level. The bed will stop automatically.

⚠ CAUTION

The reverse Trendelenburg position is integral to Chair positioning configuration. The Spirit™ bed may shift during reverse Trendelenburg activation. Attempt Chair positioning only after the Central "Lock & Steer" system has been put in the "BRAKE" position.

3.4 Emergency & Staff Functions

3.4.1 Electronic CPR (Cardiopulmonary Resuscitation) Function

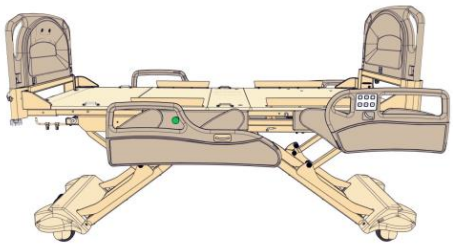
Activation of the Electronic CPR function allows **press-and-hold** flattening of the mattress deck allowing staff to administer CPR to the patient.

Activation of the Electronic CPR Function on the Footboard Staff Control

On Spirit Plus™ beds:

Press-and-hold the CPR button on the footboard staff control. The head and knee sections will automatically lower to flat position.

To interrupt the CPR function, simply release the CPR button. Normal bed operation can be resumed at any time. The Electronic CPR function does not need be deactivated or reset.



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On Spirit Select™ beds:

Press-and-hold the CPR button on the footboard staff control. The head and knee sections will lower to flat position.

IMPORTANT: The LCD display will show a notification when the CPR button on the footboard staff control is pressed to remind staff of this functional difference.

To interrupt the Electronic CPR function, simply release the CPR button. Normal bed operation can be resumed at any time. The Electronic CPR function does not need be deactivated or reset.

⚠ CAUTION

Improper use of the Electronic CPR function may cause patient injury.

Once activated, Electronic CPR function will lower head and knee sections to flat position as long as the CPR button is pressed. To interrupt Electronic CPR function, simply release the CPR button.

3.4.2 Optional Manual CPR (Cardiopulmonary Resuscitation) Release

CHG Hospital Beds offers an optional manual CPR release feature on Spirit Select™ beds.

In the event of a medical emergency, activation of the manual CPR release handle will mechanically flatten the head section (back rest) of the mattress deck allowing staff to administer CPR to the patient. The knee section of the mattress deck will also automatically flatten.

The manual CPR release will work when mains AC power has been disrupted in the event of either a power failure or when the bed is not connected to mains AC power (unplugged from the wall outlet).

If your Spirit Select™ bed has been equipped with the optional manual CPR release it will be outfitted with two CPR pull handles, one mounted on each side of the bed in the location shown.

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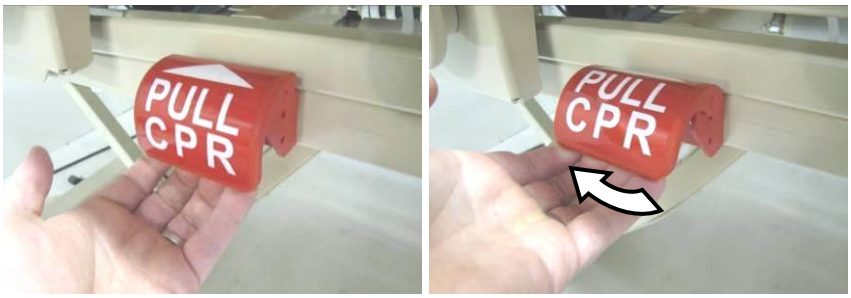
Activating the Manual CPR Release Feature

To flatten the head section (back rest), **Pull Up and Hold** either of the manual CPR release handles.



Continue to hold the CPR release handle until the head section (back rest) has been completely flattened.

⚠ CAUTION

When the bed is configured with manual CPR release, **ONLY** trained healthcare practitioners shall operate the manual CPR release in the event of a medical emergency. **ONLY** operate the CPR button and/or manual CPR release with all persons clear of mechanisms. **PRESS and HOLD** the CPR button to lower the head (back rest) and knee sections to a flat position.

To interrupt the CPR function, simply release the CPR button.

To avoid unintended CPR release keep area around CPR handle clear of obstructions.

Notifications of the Manual CPR Release Feature

Immediately after either one of the CPR release handles has been pulled, the LCD display will display the following message.

IMPORTANT: The manual CPR release feature **MUST** be reset whenever the manual CPR release handle is pulled.

If the head section (back rest) is fully flattened, the bed will automatically reset the manual CPR release feature without requiring additional action from staff.

The LCD display will display the following message to notify staff that the automatic CPR reset procedure is in progress.

The LCD display will display the following message and an audible "chirp" will sound to indicate that the automatic CPR reset procedure has been completed.

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Resetting the Manual CPR Release Feature

IMPORTANT: The manual CPR release feature **MUST** be reset whenever the manual CPR release handle is pulled.

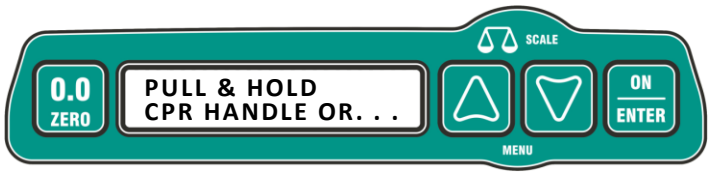
However, in the event that the manual CPR release has been interrupted before the head section (back rest) has been fully flattened, staff will need to follow the prompts on the LCD display to complete the CPR reset procedure.

To Reset the Manual CPR Release Feature:

Pull Up and Hold either of the manual CPR release handles

OR

Press-and-hold the CPR button



Additionally, in the event that any button is pressed on any control location before the head section (back rest) has been fully flattened, the automatic reset procedure will also be interrupted.

The LCD display will continue to display the following message to instruct staff to continue to **press-and-hold** the CPR button until the CPR reset procedure has been completed.

The LCD display will display the following message and an audible "chirp" will sound to indicate that the manual CPR reset procedure has been completed.

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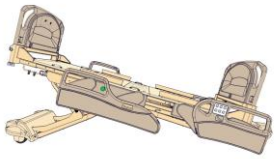
3.4.3 Trendelenburg Operation

Press-and-hold the TREND button. Release the button once the desired bed angle between 0° and 14° has been achieved.

To return the bed to the horizontal position, **press-and-hold** the rev.TREND button. The bed will automatically stop when the mattress deck has returned to the horizontal position.

The Trendelenburg angle is shown on the bed frame angle gauge integrated on the staff side of both foot siderails.

On Spirit Select™ beds, the LCD display on the enhanced footboard staff control will show the current Trendelenburg angle. The entire TREND button will also illuminate once the bed has achieved a Trendelenburg angle of greater than 2°.



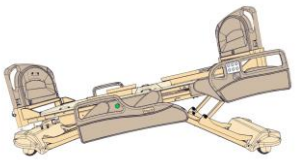
3.4.4 Reverse Trendelenburg Operation

Press-and-hold the rev.TREND button. Release the button once the desired bed angle between 0° and -14° has been achieved.

To return the bed to the horizontal position, **press-and-hold** the TREND button. The bed will automatically stop when the mattress deck has returned to the horizontal position.

The reverse Trendelenburg angle is shown on the bed frame angle gauge integrated on the staff side of both foot siderails.

On Spirit Select™ beds, the LCD display on the enhanced footboard staff control will show the current reverse Trendelenburg angle. The entire rev.TREND button will also illuminate once the bed has achieved a Reverse Trendelenburg angle greater than 2°



⚠ CAUTION

Patient discomfort may result from normal operation of the Trendelenburg and reverse Trendelenburg function.

Trendelenburg and reverse Trendelenburg modes should only be used on the advice of a medical practitioner.

⚠ WARNING

The Spirit™ bed may shift during Trendelenburg or reverse Trendelenburg activation.

Initiate Trendelenburg or reverse Trendelenburg only after the Central "Lock & Steer" system has been put in the "BRAKE" position.

NOTE: **ACCURACY:** The Trendelenburg and reverse Trendelenburg angles shown on the LCD display of the enhanced footboard staff control on Spirit Select™ bed has an approximate accuracy of ±2°.

3.5 Patient Lock-Out Functions

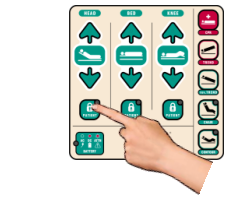
3.5.1 Regular Patient Lock-Outs

Patient Lock-Outs restrict the patient from initiating head, knee, and bed motion from the siderail controls or the pendant (if equipped). The degree of restriction depends on the Lock-Out option selected.

Activating Patient Lock-Out

Staff may choose to restrict patient access to one, two, or all three bed functions. To restrict a bed function, press the Patient Lock-Out button under that particular function. The yellow LED in the top right corner of the button (Spirit Plus™) or the entire Lock-Out button (Spirit Select™) will illuminate when patient control of a particular function has been Locked-Out.

IMPORTANT: Patient Lock-Outs restrict bed operation from both of the siderail controls and pendant (if equipped).



Deactivating Patient Lock-Out

To deactivate any/all Patient Lock-Out(s), simply press the Patient Lock-Out button(s) again. When a Patient Lock-Out button is no longer illuminated, patient control of that particular function has been restored.

NOTE: When Patient Lock-Outs have been activated, the footboard staff control remains fully active.

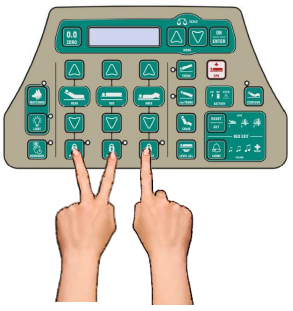
3.5.2 Master Lock-Out

To completely restrict access to all bed functions (except the Electronic CPR function) from all control locations (staff and patient controls), use the Master Lock-Out function.

Activating Master Lock-Out

To activate the Master Lock-Out, **press-and-hold** all three Patient Lock-Out buttons at the same time. All three yellow LED's in the top right corner of the three Patient Lock-Out buttons (Spirit Plus™) or all three entire Patient Lock-Out buttons (Spirit Select™) will flash sequentially to indicate that Master Lock-Out has been activated.

IMPORTANT: Master Lock-Out restricts bed operation from all control locations (both siderail controls and the footboard staff control).



Deactivating Master Lock-Out

To deactivate the Master Lock-Out function, simply repeat this process. **Press-and-hold** all three Patient Lock-Out buttons at the same time. When all three Patient Lock-Out buttons are no longer flashing sequentially, Master Lock-Out has been deactivated and both staff and patient control from all control locations has been restored.

NOTE: When Master Lock-Out has been activated, the Electronic CPR function, Nurse Call, and the underbed light remain operable. On Spirit Select™ beds, the bed exit feature also remain operable.

⚠ WARNING

When a patient is left unattended, the bed should **ALWAYS** be lowered to its lowest position and the bed elevation controls should be locked-out in order to reduce the risk of patient injury.

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3.5.3 Security Lock-Out

The Security Lock-Out feature allows for a high-security lock-out of **ALL** bed functions (including the Electronic CPR function). A ***"User Passcode"*** is required to perform any/all bed functions. The Security Lock-Out feature must be activated or deactivated as required by the facility.

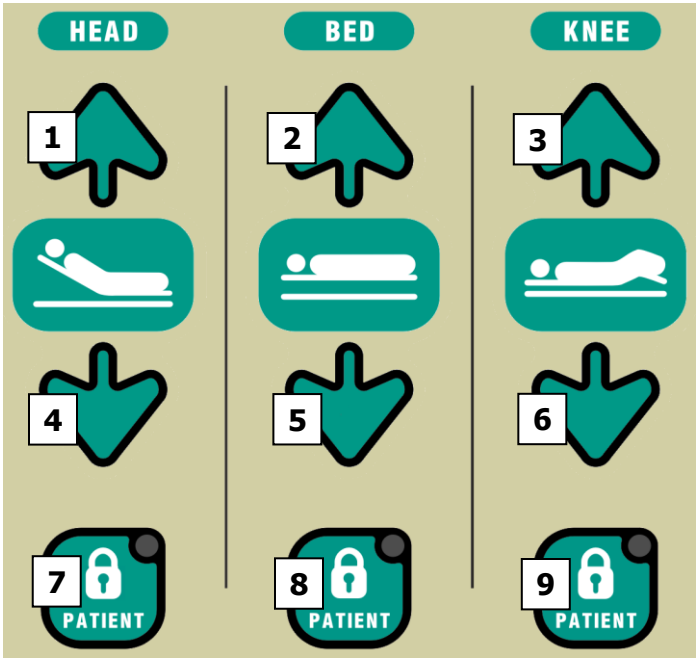
IMPORTANT: The manual CPR release function on bed (if equipped) remains operational.

⚠ WARNING

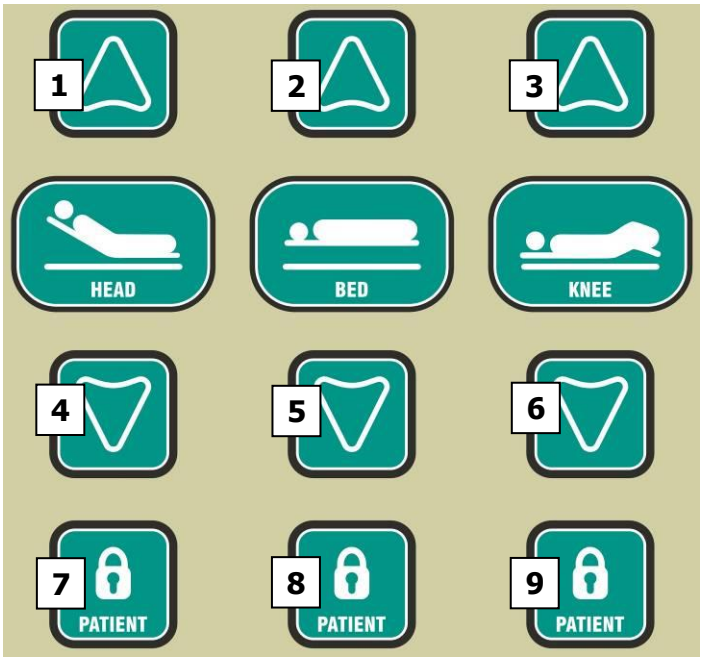
IMPORTANT: When the Security Lock-Out feature has been activated, **ALL** bed operation **including the Electronic CPR function** from any control location (footboard staff control, both siderail controls, and pendant) is restricted.

Activating the Security Lock-Out Feature

To deactivate the Security Lock-Out feature, a User Passcode must first be created. The User Passcode must be between 1 and 6 digits long. The digits are interpreted from a virtual numeric keypad superimposed over the footboard staff control buttons. Imagine the numbers 1 2 3, 4 5 6, 7 8 9, just as they would appear on a telephone. This is demonstrated below.



Spirit Plus™ keypad



Spirit Select™ keypad

Guidelines for Choosing a User Passcode

The number of digits chosen for the User Passcode will determine the level of security provided. A single digit User Passcode is easy for staff to remember and unlock but offers virtually no security. A six digit User Passcode offers very high security but may be a nuisance to staff.

- It is recommended that simple "lines" such as 1-2-3 or 1-4-7 are not chosen since they are relatively easy to guess.
- It is recommended that the code contains at least one of the Patient Lock-Out buttons (7, 8, or 9) since these buttons are not generally used during normal bed operation therefore adding an enhanced level of security.
- Codes that contain repeating digits (i.e.: 1-3-1-7) can enhance security since they are considerably less likely to be guessed.
- Codes that contain patterns of digits (i.e.: all four corners) can help staff remember the User Passcode but offer slightly less security than random codes.

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Creating/Changing User Passcode

A User Passcode must first be created before the Security Lock-Out feature can be activated.

To Create the User Passcode:

1. Press the Bed Lock-Out, Knee Lock-Out, and Contour buttons simultaneously. These three Lock-Out buttons will then begin to flash to indicate that the bed is now ready to receive the Security Access Code.
2. Enter the Security Access Code.

Security Access Code: "1881 825 153"

IMPORTANT: This Security Access Code is factory set and is not customizable

3. Once the Security Access Code has been successfully entered, an audible "chirp" will sound three times and the Contour button will also begin to flash to indicate that the bed is now ready to receive the customized User Passcode.
4. Enter a 1 to 6 digit User Passcode of your choosing. Time-out will occur if more than 30 seconds elapses between User Passcode digit input.
5. When the User Passcode has been entered, press the Contour button to complete the process. An audible "chirp" will sound to indicate that the User Passcode has been set and that the Security Lock-Out feature has now been activated.

NOTE: DO NOT allow patients to learn either the Security Access Code or the User Passcode or the Security Lock-Out feature could become compromised!

To Change the User Passcode:

In the event that the User Passcode has been lost or compromised, a new User Passcode can be created. Simply repeat the above steps to change the User Passcode. The User Passcode can be changed as often as required to maintain effective control of the Security Lock-Out feature

If, for some reason, you wish to abort the User Passcode creation/change procedure, simply press the Bed Lock-Out, Knee Lock-Out, and Contour buttons simultaneously to exit User Passcode set up mode. An audible "chirp" will sound twice and the bed will return to its previous state (Security Lock-Out activated or deactivated). The bed will also automatically return to its previous state after 30 seconds of keypad inactivity.

Locking/Unlocking the Bed for use by Staff

To enable any/all bed functions, the bed must be unlocked.

To unlock the Security Lock-Out:

1. Enter the 1 to 6 digit User Passcode.
2. Once the User Passcode has been successfully entered, an audible "chirp" will sound and the three Patient Lock-Out buttons will begin to flash to indicate that the bed is now unlocked. All bed functions are now available from all control locations (the footboard staff control and both siderail controls).

IMPORTANT: There is no feedback during this step. If you make a mistake, or if nothing happens after the User Passcode has been entered, simply re-enter the User Passcode starting at the first digit again There is no need to "cancel" or abort the procedure if you make a mistake while entering the User Passcode as the bed is "looking" only for the complete sequence of digits that comprise the User Passcode.

To re-lock the bed:

When you are finished adjusting the bed positions, press any one of the flashing Patient Lock-Out buttons to re-lock the bed. An audible "chirp" will sound twice to indicate the bed has been re-locked.

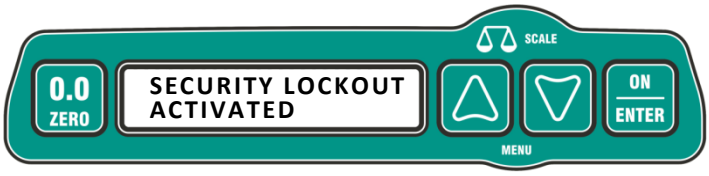
OR

The bed will automatically re-lock after 30 seconds of keypad inactivity.

Notification of the Security Lock-Out Feature

Once the Security Lock-Out feature has been activated the LCD display will display the following message whenever any button is pressed.

IMPORTANT: ALL bed operation **<u>including the Electronic CPR function</u>** from any control location (footboard staff control, both siderail controls, and pendant) is restricted.



Deactivating the Security Lock-Out Feature

To restore normal bed operation (i.e.: full time control of bed functions from any control location), the Security Lock-Out feature must be deactivated.

To deactivate the Security Lock-Out feature:

1. Press the Bed Lock-Out, Knee Lock-Out, and Contour buttons simultaneously. These three buttons will then begin to flash to indicate that the bed is now ready to receive the Security Access Code.
2. Enter the Security Access Code (**NOT** the User Passcode).
3. Once the Security Access Code has been successfully entered, an audible "chirp" will sound three times and the Contour button will begin to flash.
4. Press the Contour button. An audible "chirp" will sound twice to indicate that the Security Lock-Out feature has now been deactivated.

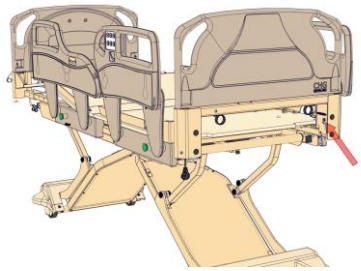
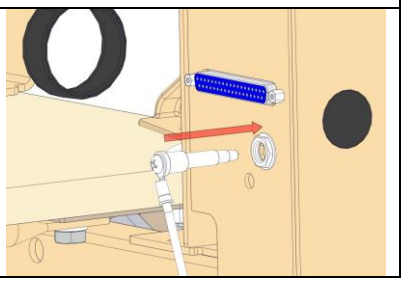
⚠ WARNING

When the Security Lock-Out feature has been activated, the Electronic CPR function will **NOT** work. The Security Lock-Out feature is only intended to be used by qualified medical practitioners on a case-by-case basis based upon clinically assessed needs of the patient as requiring a hospital bed having restricted motion. CHG Hospital Beds strongly recommends that Security Lock-Out **NEVER** be activated when the bed is in normal ward use.

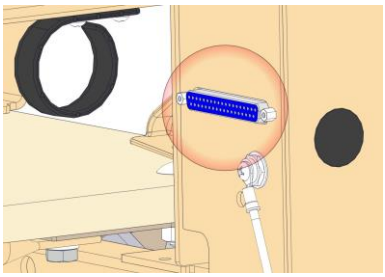
NOTE: After a hard reset, all bed settings will be automatically restored. The Security Lock-Out feature will be deactivated after a hard reset.

3.6 Other Bed Functions & Features

3.6.1 Nurse Call

All Spirit™ beds are equipped with one Nurse Call port to accommodate Nurse Call control.	
The Nurse Call port is located on the underside of the headboard mounting bracket on the patient right side of the bed.	
To operate the Nurse Call feature, press the red NURSE button on the rail patient control (inside of each head rail control). This will send a Nurse Call signal to the nurses' station when appropriately connected to the communication system of your healthcare facility. Operation of the Nurse Call feature requires a conventional connection cable (not supplied) to be plugged into the ¼" Phono jack on the headboard mounting bracket and into the designated outlet in the patient station.	
Ensure that the attached "dummy plug" is inserted to an inactive Nurse Call port. The "dummy plug" has an integral lanyard that is screw connected to the headboard mounting bracket to ensure that the "dummy plug" is not lost when the Nurse Call port is being used.	

3.6.2 Standard 37 Pin Connector

All Spirit™ beds are equipped with a standard 37 pin connector to accommodate connection to the communication system typical of most healthcare facilities.	
The 37 pin connector is located on the underside of the headboard mounting bracket directly beside the Nurse Call port on the patient right side of the bed. The "pin outs" for the 37 pin connector have been configured to work with the communication set-up typical of most 37 pin enabled healthcare facilities. If the configuration of the communication system used in your healthcare facility differs from conventional set-up, successful interconnection can only be guaranteed through the use of interconnection cables that have been specifically configured for your application. If your healthcare facility requires a particular interconnection cable configuration, CHG Hospital Beds offers customized interconnection cables. Contact your sales representative for details.	

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3.6.3 Spirit Plus™ Power Status Indicator

The footboard staff control on Spirit Plus™ beds is equipped with an integrated power status indicator. This cluster of 3 discrete icons indicates the real-time status of power available to operate the bed. The icons will illuminate respective of the source of power, the operation of the battery charging circuit, and the level of battery power.

The battery is continuously charged when connected to the CB10 control box and the bed is plugged into an AC power outlet. If the battery voltage drops below 18VDC, battery power will be automatically disrupted to prevent further discharge which could impact the battery's ability to fully recharge. When the bed is plugged back into an AC power outlet, battery power will be automatically restored.

Indicator LED is Solid GREEN

Bed is connected to an AC power outlet and operating on AC power. The battery is connected to the CB10 control box and is fully charged. Bed is ready to operate on battery power if required. This is the optimum operating condition for the bed.

Indicator LED is Flashing GREEN

Bed is connected to an AC power outlet and operating on AC power. The battery is connected to the CB10 control box but is currently recharging.

Indicator LED is Alternating Flashing GREEN and RED

IMPORTANT: Bed may not reliably operate on battery power if required.

Bed is connected to an AC power outlet and operating on AC power. The battery is connected to the CB10 control box but not holding proper charge. Service bed and/or replace battery immediately.

OR

The battery is not connected to the CB10 control box. Connect battery to CB10 and allow battery to charge for 24hr.

Indicator LED is Solid RED

Bed is disconnected from an AC power outlet and is operating on battery power. The battery is connected to the CB10 control box and has not yet exhausted the available battery power. Bed is OK to operate on battery power but it should be connected to an AC power outlet as soon as is possible to recharge the battery.

IMPORTANT: Exercise caution when operating the bed on battery power. Ensure that only vital and necessary bed functions are performed to extend battery power as long as possible and ensure emergency functions remain available when needed.

Indicator LED is Flashing RED

Bed is disconnected from an AC power outlet and has been operating on battery power. Although the battery is connected to the CB10 control box, it has exhausted its battery power. Reconnect bed to an AC power outlet as soon as possible and allow battery to charge for 24hr.

IMPORTANT: At this point, reliable bed operation cannot be guaranteed although some bed functionality may still be available. Exercise caution operating the bed as the bed will cease operation without warning.

No Indicator LED illumination

IMPORTANT: Bed may NOT operate.

The bed has been disconnected from an AC power outlet and the battery is disconnected from the CB10 control box. Reconnect bed to an AC power outlet and allow battery to charge for 24hr.

OR

The bed has a faulty connection or component (CB09 control box, CB10 control box, battery, and/or connection cable). Confirm all connections and begin troubleshooting potentially faulty components.

OR

The bed has been disconnected from an AC power outlet and the battery has been automatically disengaged from the battery circuit because the voltage has dropped below 18VDC. Reconnect bed to an AC power outlet and allow battery to charge for 24hr.

NOTE:	A new back-up battery, when fully charged, has sufficient power to deliver the equivalent of approximately 5 CPR cycles with a patient weight of 250 lbs. Battery power discharge rate depends upon factors such as patient weight, age of battery, ambient temperature and humidity, and the number of charge/discharge cycles the battery has been subjected to. For example, the heavier the patient, the faster battery power will be exhausted during battery powered bed operation. Conversely, the lighter the patient, battery power may offer a longer duration of battery powered bed operation.

3.6.4 Spirit Select™ Power Status Indicator

The enhanced footboard staff control on Spirit Select™ beds is equipped with an integrated power status indicator. This cluster of 3 discrete icons indicates the real-time status of power available to operate the bed. The icons will illuminate respective of the source of power, the operation of the battery charging circuit, and the level of battery power.

The battery is continuously charged when connected to the CB10/CB11 control box and the bed is plugged into an AC power outlet. If the battery voltage drops below 18VDC, battery power will be automatically disrupted to prevent further discharge which could impact the battery's ability to fully recharge. When the bed is plugged back into an AC power outlet, battery power will be automatically restored.

AC Light is Solid GREEN

Bed is connected to an AC power outlet and operating on AC power. The battery is connected to the CB10/CB11 control box and is fully charged. Bed is ready to operate on battery power if required. This is the optimum operating condition for the bed.

AC Light is Solid GREEN + DC Light is Flashing AMBER

Bed is connected to an AC power outlet and operating on AC power. The battery is connected to the CB10/CB11 control box but is currently recharging.

AC Light is Solid GREEN + ATTN Light is Flashing RED

IMPORTANT: Bed may not reliably operate on battery power if required.

Bed is connected to an AC power outlet and operating on AC power. The battery is connected to the CB10/CB11 control box but not holding proper charge. Service bed and/or replace battery immediately.

OR

The battery is not connected to the CB10/CB11 control box. Connect battery to CB10/CB11 and allow battery to charge for 24hr.

DC Light is Solid AMBER

Bed is disconnected from an AC power outlet and is operating on battery power. The battery is connected to the CB10/CB11 control box and has not yet exhausted the available battery power. Bed is OK to operate on battery power but it should be connected to an AC power outlet as soon as possible to recharge the battery.

IMPORTANT: Exercise caution when operating the bed on battery power. Ensure that only vital and necessary bed functions are performed to extend battery power as long as possible and ensure emergency functions remain available when needed.

DC Light is Solid AMBER + ATTN Light is Flashing RED

Bed is disconnected from an AC power outlet and has been operating on battery power. Although the battery is connected to the CB10/CB11 control box, it has exhausted its battery power. Reconnect bed to an AC power outlet as soon as possible and allow battery to charge for 24hr.

IMPORTANT: At this point, reliable bed operation cannot be guaranteed although some bed functionality may still be available. Exercise caution operating the bed as the bed will cease operation without warning.

NO Light illumination

IMPORTANT: Bed may NOT operate.

The bed has been disconnected from an AC power outlet and the battery is disconnected from the CB10 control box. Reconnect bed to an AC power outlet and allow battery to charge for 24hr.

OR

The bed has a faulty connection or component (CB09 control box, CB10/CB11 control box, battery, and/or connection cable). Confirm all connections and begin troubleshooting potentially faulty components.

OR

The bed has been disconnected from an AC power outlet and the battery has been automatically disengaged from the battery circuit because the voltage has dropped below 18VDC. Reconnect bed to an AC power outlet and allow battery to charge for 24hr.

NOTE:

A new back-up battery, when fully charged, has sufficient power to deliver the equivalent of approximately 5 CPR cycles with a patient weight of 250 lbs. Battery power discharge rate depends upon factors such as patient weight, age of battery, ambient temperature and humidity, and the number of charge/discharge cycles the battery has been subjected to. For example, the heavier the patient, the faster battery power will be exhausted during battery powered bed operation. Conversely, the lighter the patient, battery power may offer a longer duration of battery powered bed operation.

3.7 Siderail Operation

All Spirit™ bed siderail assemblies fully comply with FDA and Health Canada patient entrapment reduction guidelines and have successfully passed rail entrapment testing using test procedures outlined by the Hospital Bed Safety Workgroup. Spirit™ bed siderail assemblies were qualified using the Cone and Cylinder Tool as specified by FDA and Health Canada patient entrapment reduction guidelines. Entrapment Test Kits are readily available so on-going compliance can be monitored by the healthcare provider. For further information, refer to the FDA's website at http://www.fda.gov/cdrh/beds/.

3.7.1 Intended Application/Use of Spirit™ Bed Siderail Assemblies

When fully raised/closed and locked/latched in the UP position, the siderails define a residence area for patients to rest upon the bed. This provides positive patient location/support helping to protect against the potential for patients to fall from the bed as the siderails give the patient a visual and physical indicator of the edge of the bed. When fully lowered/open in the DOWN position, the siderails permit patient ingress to and egress from the bed. The integral handles common to all siderails facilitate patient mobility by providing a gripping region during ingress to and egress from the bed.

⚠ WARNING

Safe Working Load of Siderails

80 kg (176 lbs)

DO NOT exceed a 80 kg (176 lbs) load on any siderail

⚠ WARNING

Possible **PATIENT ENTRAPMENT** if use of siderails that are damaged or modified in any way.

NEVER use siderails from other manufacturers and/or with dimensions different that the original components and/or assemblies that came equipped with the bed. Variations in siderail design, (width, height, shape, profiles, opening, locking/latching mechanisms, etc.) could cause/contribute to patient entrapment and/or could potentially increase the probability/possibility for patient entrapment.

⚠ CAUTION

DO NOT use the siderails as a patient lifting device/apparatus. Siderails can be deformed or broken if excessive side loading/pressure is exerted. The siderails are used for the purpose of preventing a patient from inadvertently rolling out of bed.

DO NOT use the siderails as part of a patient restraint mechanism. Siderails are **NOT** intended for nor may be used for restraint purposes. If a patient is capable of inflicting self-injury or injury to staff, a physician or other suitably trained healthcare practitioner should be consulted for alternate means of safe patient restraint. The Spirit™ bed is equipped with 6 patient restraint loops for this purpose.

⚠ CAUTION

When operating the bed, **ALWAYS** ensure that the individuals using the bed is positioned properly on the mattress within the confines of the bed.

DO NOT let any patient extremities protrude over the side and/or between the siderails when operating the bed.

⚠ CAUTION

DO NOT use the siderails as lifting points for the bed during transportation and/or storage.

DO NOT use the siderails as a means of mechanically restraining the bed during transportation and/or storage.

⚠ CAUTION

DO NOT use a bed with damaged or non-latching rails. If a bed is found with damaged or non-latching rails, remove bed from patient use and service bed immediately.

3.7.2 Plastic Regular Height Siderails

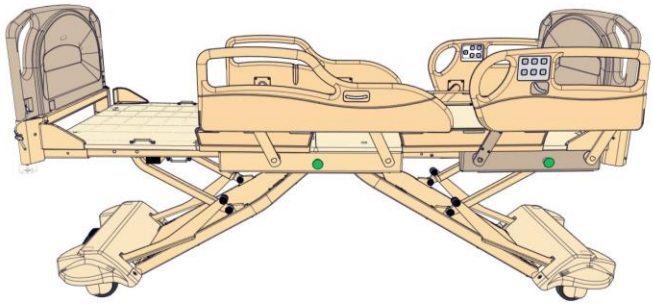
All Spirit™ bed comes with moulded plastic siderails as standard equipment.

Operation of the Plastic Siderails

It is important that caregivers know how to operate the plastic siderails safely. The plastic siderails lock/latch in the UP position and enables patient ingress, egress, and transfer in the DOWN position.

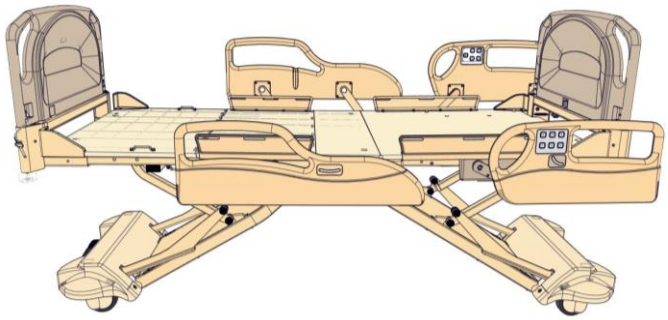
In the UP position, the Plastic siderails provide positive patient location and support helping to protect the patient from the potential of falling from the bed.

IMPORTANT: An audible "click" should be heard when each siderail assembly has been completely rotated into the UP position as the locking/latching mechanism engages.



The DOWN position, the plastic siderails fully rotate out of the way to provide unimpeded and unassisted patient ingress to and egress from the bed and also enables patient transfer by staff.

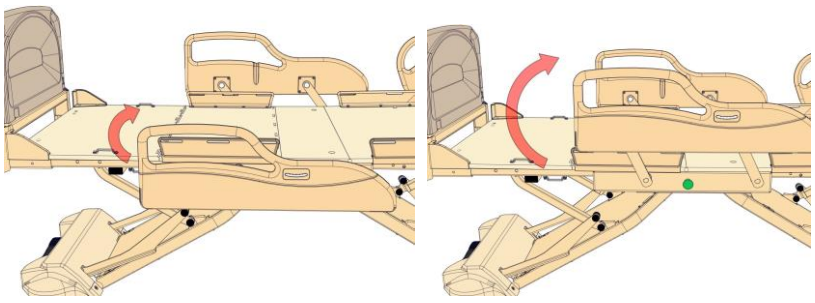
IMPORTANT: The siderails will not lock/latch in the DOWN position.



Raising the Foot Siderails

Gently rotate the foot siderail to the UP position. The foot siderail will first arc toward the foot end of the bed then back towards the head end of the bed as it rotates to the UP position.

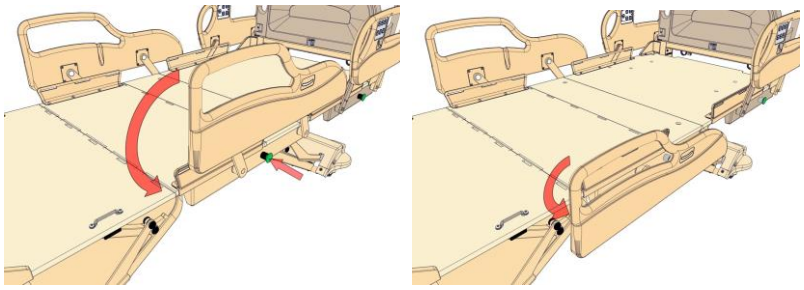
IMPORTANT: An audible "click" should be heard when the foot siderail has been completely raised to the UP position as the locking/latching mechanism engages.



Lowering the Foot Siderails

Depress the green PRESS button then gently PRESS down on the foot siderail. The foot siderail will first arc towards the foot end of the bed then back towards the head end of the bed as it rotates to the DOWN position.

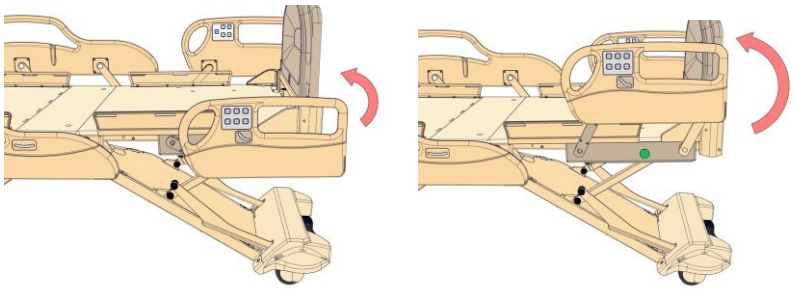
IMPORTANT: The foot siderails will not lock/latch in the DOWN position.



Raising the Head Siderails

Gently rotate the head siderail to the UP position. The head siderail will first arc toward the head end of the bed then back towards the foot end of the bed as it rotates to the UP position.

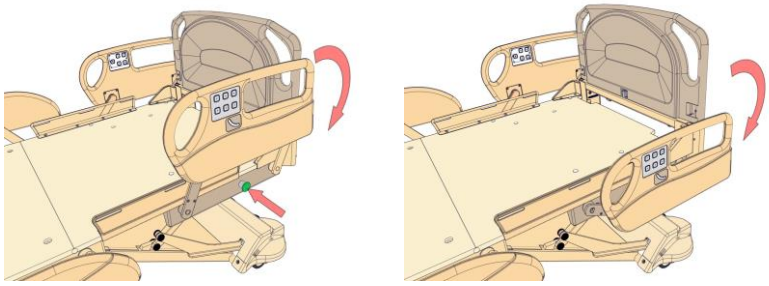
IMPORTANT: An audible "click" should be heard when the head siderail has been completely raised to the UP position as the locking/latching mechanism engages.



Lowering the Head Siderails

Depress the green PRESS button then gently PRESS down on the head siderail. The head siderail will first arc towards the head end of the bed then back towards the foot end of the bed as it rotates to the DOWN position.

IMPORTANT: The head siderails will not lock/latch in the DOWN position.



3.7.3 Plastic High Siderails

Your Spirit™ bed may be equipped with the optional moulded plastic high siderails*.

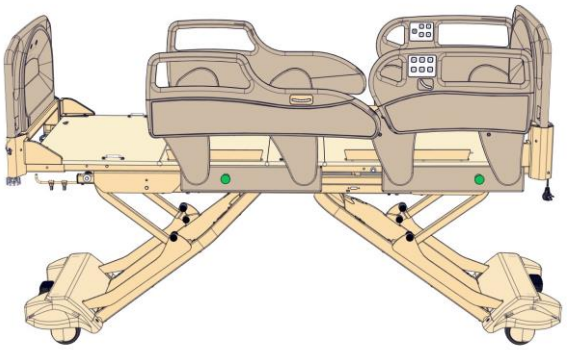
**Plastic high siderails come standard with CHG beige colour matched inlays. Plastic high siderails shown have optional coloured inlays.*

Operation of the Plastic High Siderails

It is important that caregivers know how to operate the plastic high siderails safely. The high siderails lock in the UP position and enables patient ingress, egress, and transfer in the DOWN position.

In the UP position, the high siderails provide positive patient location and support helping to protect the patient from the potential of falling from the bed.

IMPORTANT: An audible "click" should be heard when each high siderail assembly has been completely rotated into the UP position as the locking/latching mechanism engages.



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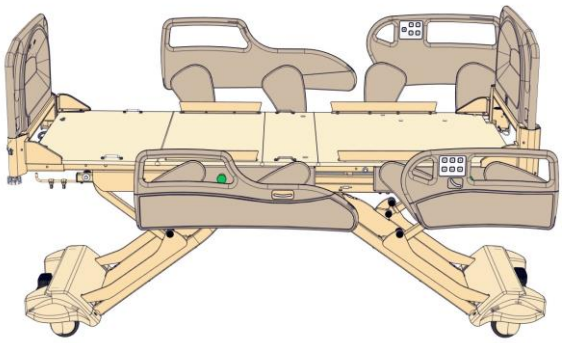
The DOWN position, the high siderails fully rotate out of the way to provide unimpeded and unassisted patient ingress to and egress from the bed and also enables patient transfer by staff.

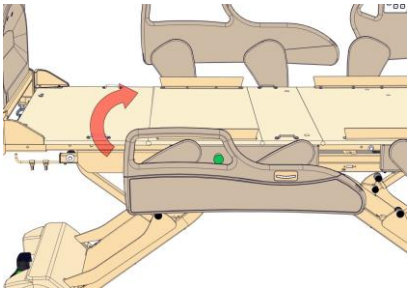
IMPORTANT: The high siderails will not lock/latch in the DOWN position.

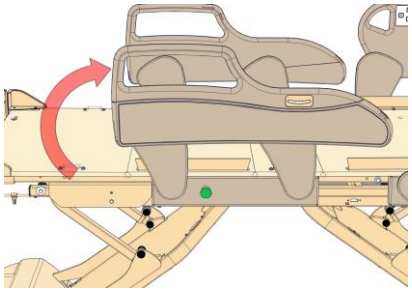


Raising the High Foot Siderails

Gently rotate the high foot siderail to the UP position. The high foot siderail will first arc toward the foot end of the bed then back towards the head end of the bed as it rotates to the UP position.

IMPORTANT: An audible "click" should be heard when the high foot siderail has been completely raised to the UP position as the locking/latching mechanism engages.

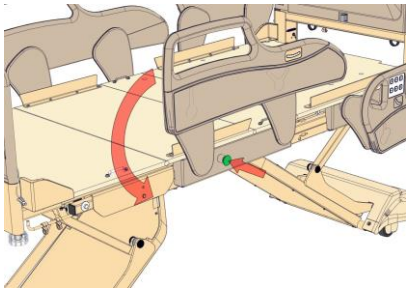


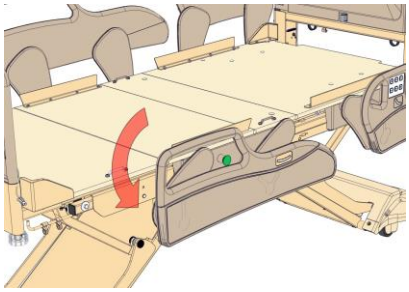


Lowering the High Foot Siderails

Depress the green PRESS button then gently PRESS down on the high foot siderail. The high foot siderail will first arc towards the foot end of the bed then back towards the head end of the bed as it rotates to the DOWN position.

IMPORTANT: The high foot siderails will not lock/latch in the DOWN position.

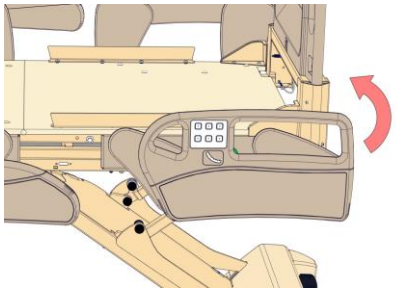


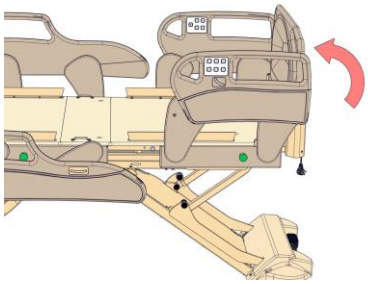


Raising the High Head Siderails

Gently rotate the high head siderail to the UP position. The high head siderail will first arc toward the head end of the bed then back towards the foot end of the bed as it rotates to the UP position.

IMPORTANT: An audible "click" should be heard when the high head siderail has been completely raised to the UP position as the locking/latching mechanism engages.





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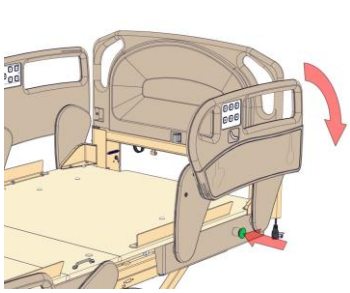
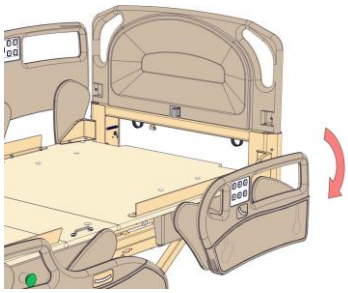
Lowering the High Head Siderails

Depress the green PRESS button then gently PRESS down on the high head siderail. The high head siderail will first arc towards the head end of the bed then back towards the foot end of the bed as it rotates to the DOWN position.

IMPORTANT: The high head siderails will not lock/latch in the DOWN position.





⚠ CAUTION

To ensure the accuracy of the scale and alarms, keep the area around and/or under the bed open and free of obstructions and/or equipment.

To ensure optimal scale accuracy, CHG Hospital Beds recommends that the siderails be fully raised/closed and locked/latched in the UP position before reading patient weight.

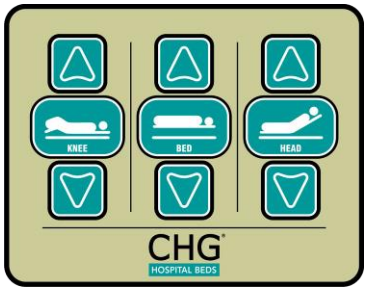
3.7.4 Integrated Features of Plastic Regular Height and High Siderails

Staff Siderail Controls

The head siderails incorporate integrated staff control that offers staff control of basic bed operations:

- Head UP/DOWN,
- Knee/Foot UP/DOWN
- Bed UP/DOWN

IMPORTANT: Bed operation from this siderail control is disabled when the patient lock-outs are activated.

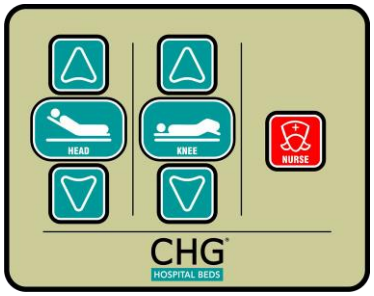


Patient Siderail Controls

The head siderails incorporate integrated patient control that offers patient control of basic bed operations:

- Head UP/DOWN,
- Knee/Foot UP/DOWN
- Nurse Call feature

IMPORTANT: Bed operation from this siderail control is disabled when the patient lock-outs are activated however the Nurse Call feature **always** remains active.

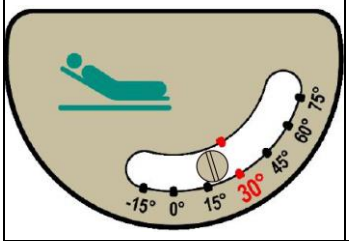


Angle Gauges

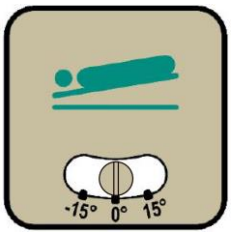
All four siderails have integrated angle gauges:

- The angle gauge in the head siderail panel displays the angle of the head section of the mattress deck.
- The angle gauge in the foot siderail panel displays the Trendelenburg or reverse Trendelenburg angle.

NOTE: Angle Gauges are for Reference **ONLY**



Head Angle Gauge



Trend or rev Trend Angle Gauge

© CHG Hospital Beds Inc.

3.7.5 Other Optional Siderails

Your Spirit™ bed may be equipped other optional moulded plastic siderails as shown below.

IMPORTANT: These other optional siderails operate exactly the same as described above.

Plastic High Head Siderails ("Filled-in" version with beige inlays shown)

Plastic Long High Head Siderails (optional wood head and footboards with beige inlays shown)

3.7.6 Optional Electronic Foot Siderail Release

To accommodate the needs of some patients to have a greater level of mobility and independence, CHG Hospital Beds offers an optional Electronic Foot Siderail Release feature. This feature allows the patient to unlock/unlatch the foot siderails while in the bed by pressing a button on the head siderail control. This will permit patient ingress to and egress from the bed without the aid from staff.

If your Spirit Select™ bed has been equipped with the the optional electronic foot siderail release it will be outfitted with enhanced staff/patient head siderail controls as shown below.

IMPORTANT: The mechanical operation of beds equipped with the Electronic Foot Siderail Release feature is the same as standard production high siderails but simply have an additional button on the head rail controls which permits the foot siderail to be electronically unlocked/unlatched.

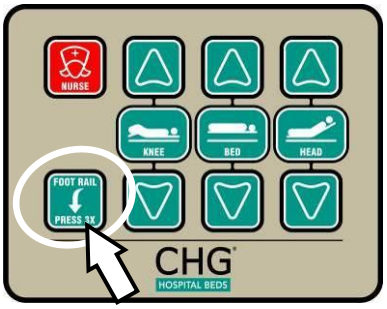
Enhanced Siderail Controls

The head siderails incorporate integrated controls which offer both staff and patient control of basic bed operations:

- Head UP/DOWN,
- Bed UP/DOWN
- Knee/Foot UP/DOWN
- Nurse Call feature
- Electronic Foot Siderail Release

IMPORTANT: Similarly to the standard siderail controls, bed operation from this from this siderail control is disabled when the patient lock-outs are activated however the Nurse Call feature **always** remains active.

IMPORTANT: The Electronic Foot Siderail Release feature is disabled when the bed UP/DOWN lock-out is activated.



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Electronic Foot Siderail Release Functionality

To avoid accidental release of the foot siderail, the release button must be pressed 3 times to activate the electronic release.

To Electronically Release the Foot Siderails:

- Press the **"FOOT RAIL/PRESS 3X"** button 3 times within a period of 5 seconds. An audible chirp will sound after each button press as confirmation to the patient. An audible "click" should be heard when the foot siderail(s) electronically unlocks/unlatches.

IMPORTANT: If a period of greater than 5 seconds elapses before the button is pressed 3 times, the foot rail will not release. An audible two tone chirp will sound to indicate a failed release attempt.

In the event that the foot siderails fail to electronically unlock/unlatch, if, say, bed linens prevent foot rail rotation, the patient may be inclined to make additional attempts to release the foot rail. To prevent premature component failure, only 3 attempts to activate this feature will be permitted in a row. Followed by a rest period of 1 minute to prevent the solenoid from overheating.

If your bed has been equipped with this optional feature, **the factory default setting for Electronic Foot Siderail Release is ENABLED (both PL and PR sides)**. This setting can be changed by following the instructions below.

⚠ WARNING

NEVER attempt to release the foot siderail when the patient is supporting their weight on the foot siderails. **NEVER** hang or drape anything over foot siderails.

CHG Hospital Beds recommends that the customer perform a thorough patient assessment to determine if enabling the electronic foot siderail release is appropriate for the patient on the basis of their clinical needs, fall risk, and mental capacity.

To Enable/Disable the Electronic Foot Siderail Release Feature

From the SERVICE Menu:

1. Press the UP/DOWN arrow buttons to scroll to the FOOT RAIL RELEASE screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
   - LEFT ENABLED (patient left foot siderail release enabled)
   - RIGHT ENABLED (patient right foot siderail release enabled)
   - BOTH ENABLED (both patient left and patient right foot siderail release enabled)
   - RAIL RELEASE DISABLED
3. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Electronic Foot Siderail Release setting has been changed. Press the 0.0/ZERO button to "escape" to the home screen.

3.8 Optional Underbed Light on Spirit Plus™ Beds

Spirit Plus™ beds can be equipped with integrated underbed lighting as an option however the underbed light cannot be deactivated using the footboard staff control. If the underbed light needs to be deactivated, both of the underbed lights need to be disconnected from the CB10Lite control box. Refer to page 133 to identify the two connectors for the underbed lights:

- To disable the underbed lights, disconnect both of the light connectors from the LT1 and LT2 headers on the CB10Lite circuit board.

The ONLY setting for the underbed light: LOW brightness ALWAYS ON.

IMPORTANT: There are no MEDIUM or HIGH brightness setting or visual indicator on Spirit Plus™ beds.

NOTE: Underbed lighting **WILL NOT** function (illuminate) when the bed is operating under battery power. This is to reserve battery power for emergency functions.

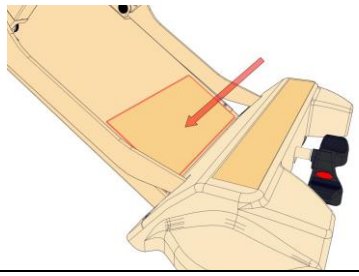
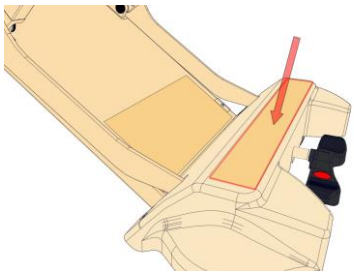
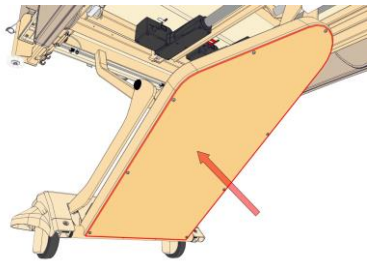
Underbed & Night Light on Spirit Select™ Beds

The Spirit Select™ is equipped with integrated underbed lighting. See Section ***4.6.4 Available Light Configurations*** for more information

3.9 Optional Underbed Obstruction Sensors

If your Spirit™ bed has been equipped with the optional underbed obstruction sensors, the bed will be outfitted with 6 obstruction sensors as shown below.

IMPORTANT: The operation of the obstruction sensors is identical for all beds. While all beds have the audible component of this feature, only Spirit Select™ beds have visual indication and message display.

		
Top Cover Obstruction Sensor	Caster Cover Obstruction Sensor	Bottom Cover Obstruction Sensor

Contact with an Obstruction While the Bed is in Downward Motion

When an obstruction is detected during any downward motion of the bed (using any of the following: BED DOWN, TREND, rev.TREND, LEVEL ALL, or CHAIR position), the bed will immediately stop all downward motion and the bed platform will automatically elevate up a safety distance of 1". This will provide clearance for removal of the obstruction.

- On Spirit Select™ beds, once an obstruction has been detected, the ***obstruction indicator*** (BED UP button) will begin to flash and an audible "chirp" will sound. A warning message will also be displayed. The ***obstruction indicator*** will continue to flash to remind staff that an obstruction was detected during the last attempt to initiate downward motion of the bed platform.
- On Spirit Plus™ beds an audible "chirp" will sound.

Any further attempts to initiate downward motion of the bed platform will not be permitted if an obstruction is still being detected and the bed platform will emit an audible "chirp" after each attempt.

Contact with an Obstruction While Bed is Stationary (i.e.: Bed not in Motion)

When an obstruction is detected prior to any bed movement, all downward motion of the bed (using any of the following: BED DOWN, TREND, rev.TREND, LEVEL ALL, or CHAIR position) will be automatically disabled.

- On Spirit Select™ beds, the ***obstruction indicator*** will flash until the obstruction is removed. A warning message will also be continuously displayed and an audible "chirp" will sound when any downward motion of the bed platform is attempted. Press the ENTER button to acknowledge and clear the warning message.
- On Spirit Plus™ beds an audible "chirp" will sound.

Any further attempts to initiate downward motion of the bed platform will not be permitted if an obstruction is still being detected and the bed platform will emit an audible "chirp" after each attempt.

When an Obstruction is not Detected (i.e.: Obstruction Removed)

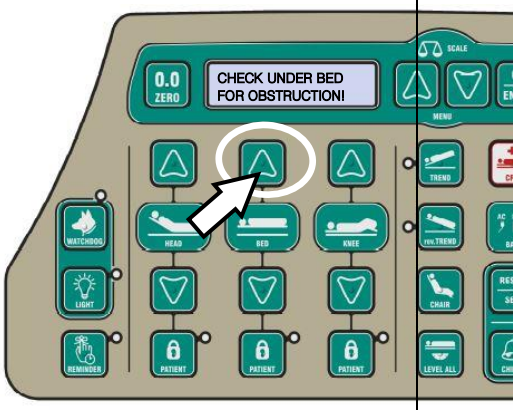
When an obstruction is no longer detected:

- On Spirit Select™ beds, the ***obstruction indicator*** will stop flashing and normal bed operation will be restored.
- On Spirit Plus™ beds, normal bed operation will be restored.

Visual and Audio Indicators

Visual Obstruction Indicator: *(Spirit Select™ only)*

In addition to operating BED UP functionality, the BED UP serves as an ***obstruction indicator*** by illuminating & flashing whenever an obstruction has been detected. The "CHECK UNDER BED FOR OBSTRUCTION" warning message will also be displayed.



Audio Obstruction Indicator: *(all Spirit™ beds)*

When an obstruction is contacted during bed motion or if an obstruction is detected prior to any bed lowering motion and a downward motion of the bed platform (using any of the following: BED DOWN, TREND, rev.TREND, LEVEL ALL, or CHAIR position) is attempted an audible "chirp" will sound.

On Spirit Select™ beds, **the factor default setting for obstruction sensors is ENABLED.** In the rare event of component failure and/or malfunction, the obstruction sensor system can be disabled in the Service Menu to restore bed functionality until the bed can be properly serviced. Refer to page 100 for instructions.

On Spirit Plus™ beds **the factor default setting for obstruction sensors is CONNECTED and OPERATING.** This cannot be changed using the footboard staff control. The obstruction sensors can only be enabled/disabled by connecting/disconnecting the obstruction sensor circuits from the CB10Lite circuit board. Refer to page 133 to identify the two connectors for the obstruction sensor circuits.

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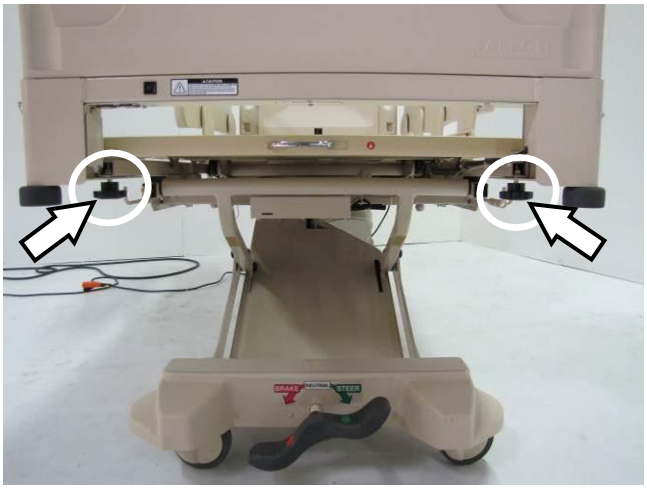
3.10 Optional "Easy Bed" Extension System

To accommodate the physical needs of taller patients, while maintaining the easy of frequent bed movement about space confined healthcare facilities, CHG Hospital Beds offers an optional "Easy Bed" extension system that allows for easy and rapid extension/retraction of the mattress deck by 4 inches (102 mm) from 80" (2032 mm) to 84" (2134 mm). No tools are required to perform bed "Easy Bed" extension/retraction operations.

If your Spirit™ bed has been equipped with the optional "Easy Bed Extension" system, the bed will be outfitted with two clamping knobs and an extendable foot deck section of the mattress deck as shown below.

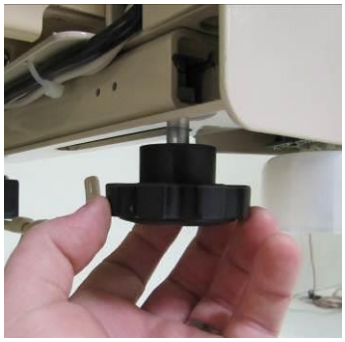


Clamping Knobs *(viewed from foot end of bed)*

Extendable Foot Deck Section

Bed Extension Procedure

Knob clamped



Knob unclamped

1. Elevate bed to comfortable working height. Unclamp the footboard bracket slide mechanism by turning both knobs counter-clockwise until they stop turning freely.

2. Grasp footboard bracket by the corners as shown above. Gently and smoothly pull away from the head of the bed until the footboard bracket slide mechanism contacts its mechanical stops.

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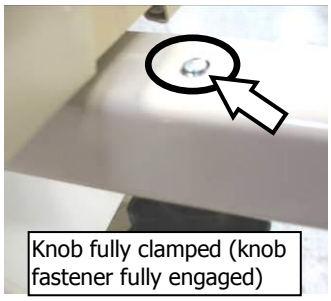
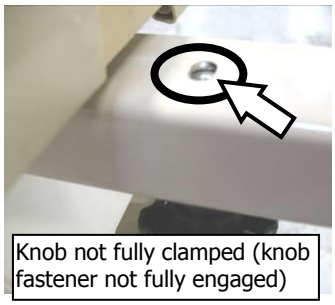


Knob fully clamped (knob fastener fully engaged)



Knob not fully clamped (knob fastener not fully engaged)

3. Clamp the footboard bracket slide mechanism by turning both retention knobs clockwise until hand tight.

IMPORTANT: Ensure that the clamping knob fastener extends through the retention hole located in the footboard bracket channel. Typical both sides.

4. Unlock foot deck extension pan by grasping the chrome handle and sliding the locking mechanism towards the patient left side of the bed to the unlocked position (green, unlocked icon)

5. Grasp the chrome handle as shown at right. Gently and smoothly pull away from the head end of the bed until the foot deck extension pan contacts its mechanical stops.

6. Lock foot deck extension pan by grasping the chrome handle and sliding the locking mechanism towards the patient right side of the bed to the locked position (red, locked icon).

⚠ WARNING

Possible **PATIENT ENTRAPMENT Hazard** could occur if the mattress is not securely located and retained on the mattress deck by the four corner mattress keepers.

NEVER perform a bed extension/retraction with a patient on the bed.

NEVER place a patient on the bed if the mattress is not properly located and retained on the mattress deck by the four corner mattress keepers.

⚠ CAUTION

Possible **UNEXPECTED MOTION** could occur if the slide lock is not in the "lock" position and the mattress deck is articulated from the horizontal position.

When the bed is in either the extended or retracted position, the clamping knob fasteners **MUST** be fully engaged and the slide lock **MUST** be in the "lock" position prior to placing a patient on the bed and/or allowing a patient to return to the bed.

NOTE:

Bed retraction procedure is the same as the above except that the footboard bracket and the foot deck extension pan are pushed towards the head end of the bed until contact is made with their respective mechanical stops.

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3.11 Optional Auxiliary AC Power Outlet

NEMA 5-15R Outlet Socket configuration shown

All Spirit™ beds can be equipped with an optional auxiliary AC power outlet mounted in the patient right side of the footboard bracket.

IMPORTANT: The auxiliary AC power outlet has the following electrical ratings:

MAXIMUM Output Power Rating: 120 Volts AC, 600 Watts
OR 230 Volts AC, 690 Watts
DO NOT EXCEED MAXIMUM OUTPUT POWER RATING

Auxiliary AC Power Outlet Cover

The auxiliary AC power outlet has a cover that is integrated into the footboard bracket. The attachment screw is retained with a nylon nut so that it will not be misplaced when the auxiliary outlet is in use.

IMPORTANT: Always install the cover over the auxiliary AC power outlet when it is not in use.

Circuit Breaker: Rating 5 Amps (120V Beds) OR 3 Amps (230V Beds)

The auxiliary AC power outlet socket is protected by a circuit breaker. The circuit breaker is located in the footboard bracket. The circuit breaker is the resettable type. Simply depress the button to re-engage the circuit breaker.

IMPORTANT: The circuit breaker is a safety device that is designed to disengage an electrical circuit when the load exceeds the maximum rating of the circuit. An overloaded circuit may cause irreparable damage to the AC power wiring in the bed. If the circuit breaker trips, it is important to understand what has happened to cause this event. The device(s) the bed is connected to may be drawing too much power and exceeding the circuit breaker rating.

⚠ CAUTION

The auxiliary AC power outlet socket is rated for a **MAXIMUM 120 Volts AC, 600 Watts OR 230V Volts AC, 690 Watts** output power. **DO NOT** exceed the maximum output power rating.

DO NOT use the auxiliary AC power outlet socket if the socket receptacles appear to be damaged and/or if the plug (of the device that you are connecting to the bed) does not remain connected when inserted in the outlet socket receptacles.

Only replace this outlet socket with a NEMA 5-15R duplex outlet socket that is marked as hospital grade. Contact CHG Hospital Beds' Customer Service for a replacement outlet socket.

⚠ WARNING

A circuit breaker is **NOT** designed to act as a ground fault circuit interrupter (GFCI) and **DOES NOT** offer the same level of protection. The circuit breaker is a safety device that is designed to only disengage an electrical circuit when the load exceeds the maximum rating. If the circuit breaker trips, discontinue bed use immediately and have a service technician, specifically trained to service Spirit™ beds, inspect the wiring. **Circuit Breaker Rating: 5 Amps (120V beds) or 3 Amps (230V beds)**

⚠ CAUTION

Connecting electrical equipment to auxiliary mains AC outlet effectively leads to creating a medical equipment system and can result in a reduced level of safety. When connecting devices, the system shall be evaluated in end use application to ensure compliance to medical device standard 60601-1 and 60601-1-1.

3.12 Optional Pillow Speaker Ready

All Spirit™ Select beds can be configured to connect an optional pillow speaker.

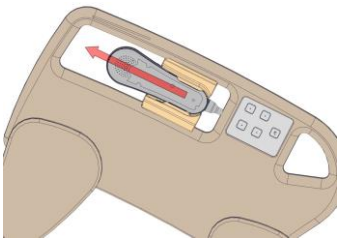
The pillow speaker offers patients control of the following basic operations (but are not limited to):

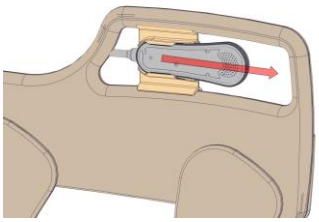
- Entertainment Controls
  - TV Channels
  - TV Volume
  - Etc.
- Nurse Call Button
- Room Light
- Read Light

Pillow Speaker Storage

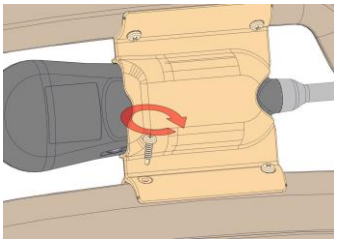
The pillow speaker can be affixed to the bed using a holder. The pillow speaker slips into the holder for easy location and convenient patient access.

The pillow speaker holder can be installed into any of the high rail openings. To permanently affix the holder to the bed, screws the holder to the foot or head rail panel with the fasteners provided.





Locate the optimal position for the holster within the rail openings. Ensure the pillow speaker can freely slip in and out of the holster with minimal effort. To permanently affix the holder to the bed, fasten the holder to the foot or head rail panel with the hardware provided.



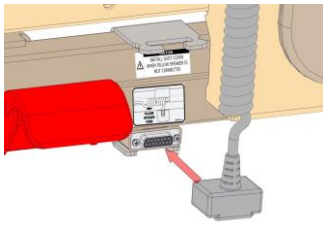
⚠ CAUTION

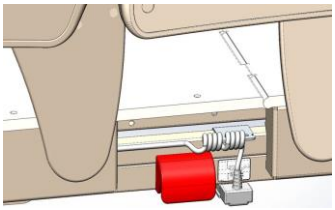
If connecting a Pillow Speaker for the first time refer to document **3-80-097** for installation instructions. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 to obtain instructions.

Pillow Speaker Connection

The pillow speaker can be connected on either side of the bed (the connection port is between the foot and head rails on the lower frame).

To relocate the pillow speaker to the opposite side of the bed, first, carefully disengage the coiled cable from the pillow speaker bracket. Disconnect the pillow speaker from the DB15 port. Reconnect the pillow speaker cable to the existing port on the other side of the bed. Route the coiled portion of the pillow speaker cable through the pillow speaker bracket as depicted in the label located directly above the pillow speaker port.





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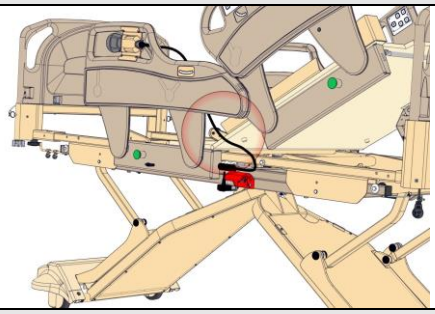
Pillow Speaker Cable Routing

CHG recommends Pillow Speaker cabling to ALWAYS be safely routed through the gap between the Head and Foot rails. Routing the cable in this fashion will minimize the creation of a trip hazard and rail entanglement.

Check rail movement to ensure Pillow Speaker cable does not become entangled in rails

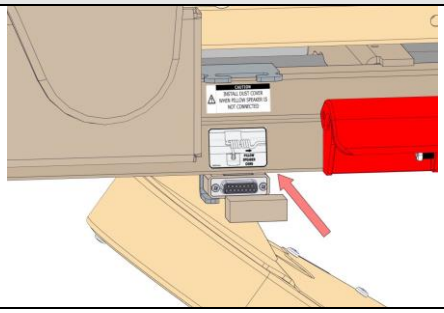


Pillow Speaker Port Care

ALWAYS ensure that the coiled portion of the pillow speaker cable if correctly and securely routed thought the pillow speaker bracket to provide strain relief for the connection port.

To ensure that the pillow speaker port remains free of dirt and debris, **ALWAYS** cap any pillow speaker port not in use. The cap is simply snap fit onto the unused end of the pillow speaker T-cable.

If you relocate the pillow speaker to the other side of the bed, ensure that you cap the unused pillow speaker port.



⚠ CAUTION

Ensure cables are routed properly to prevent damage to Pillow Speaker and rail entanglement. Using the label located directly above the connection point, route cable into pillow speaker bracket as shown. Failure to route cable properly may result in serious injury.

⚠ CAUTION

ALWAYS ensure protective caps are installed when a pillow speaker is not connected to the pillow speaker port to prevent contamination and to provide protection from Electrostatic Discharge (ESD)

⚠ WARNING

Only use Pillow Speakers provide by CHG Hospital Beds. The use of a third party pillow speaker may cause adverse effects, and may permanently damage parts of the nurse call system. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for additional information

⚠ CAUTION

If upon 1st connection of the Pillow Speaker Pendant to the CHG Spirit™ Bed the TV system begins to exhibit abnormal operation (i.e. channels switching automatically), TV polarity may need to be adjusted. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for additional instruction on how to resolve this issue.

⚠ WARNING

Pillow Speakers contain magnets and may interfere with sensitive devices.

⚠ CAUTION

Not for standalone use or direct connection to wall. To be used only when connected to a CHG Spirit Hospital Bed.

Section 4:

Spirit Select™ - Unique Functions & Features

4.1 LCD Display

The enhanced footboard staff control on Spirit Select™ beds is equipped with an integral LCD display.

Home Screens

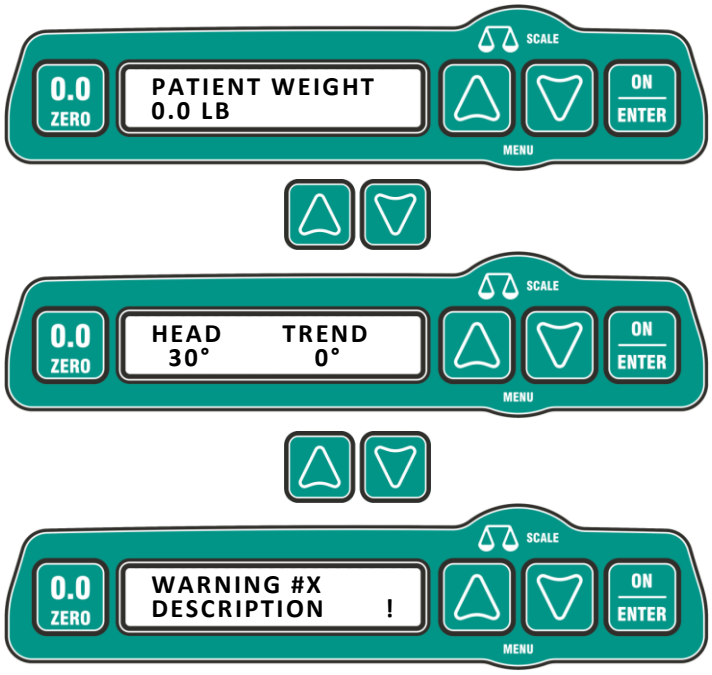
LB units and 30° HEAD and 0° TREND angle for this example

When the LCD display is activated, the home screen will default display the patient weight in either kilograms (KG) or pounds (LB) depending upon which unit of measure has been set for patient weight display.

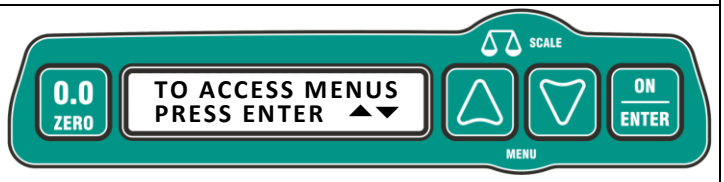
Pressing the UP/DOWN arrow buttons will scroll through the home screens:

- PATIENT WEIGHT
- HEAD angle and TREND/rev.TREND angle
- WARNINGS (if any)

IMPORTANT: No warning screens will be displayed if the bed has not detected any problems or no safety feature has been disabled.

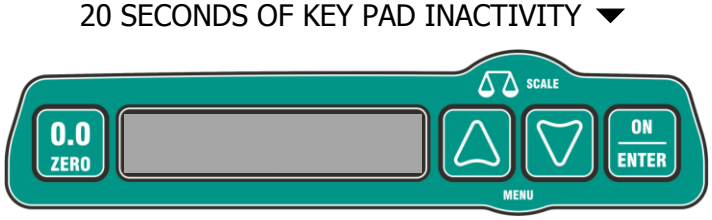


Between the HEAD angle and TREND/rev.TREND angle home screen and WARNINGS home screen (if any) the LCD display the following message to help staff navigate into the menus.



After 20 seconds of keypad inactivity has elapsed, the LCD display will go into "sleep" mode (become inactive).

The LCD display is activated or "wakes up" when the ON/ENTER, TREND, or rev.TREND buttons are pressed.



On/Enter Button

"ON" Functionality of this Button

Press this button to activate or "wake up" the LCD display.

"ENTER" Functionality of this Button

Press this button (as enter button) when prompted by the LCD display to make desired selections within menu options.

UP/DOWN Arrow Buttons

Press the UP/DOWN arrow buttons to scroll up or down in the different menus and to scroll through the available options within the menus when making desired selections.

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Warning Screens

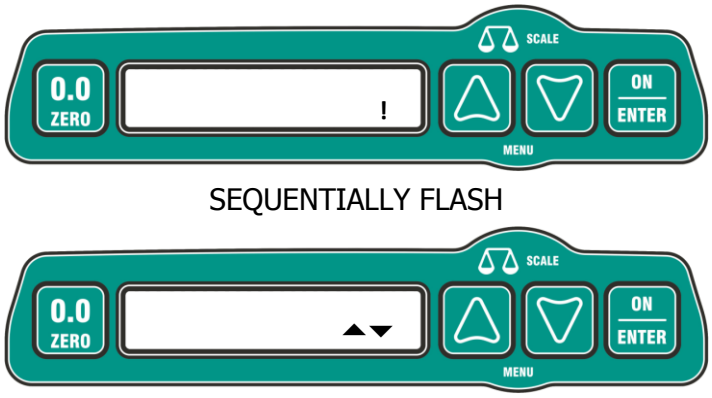
The bed has the ability to detect warning conditions and display them to the user.

Warnings will be displayed whenever the bed is in an alarm condition or detects a fault or problem (i.e.: failed component) or whenever a safety feature has been disabled (turned OFF in the associated menu).

To view active warnings, return to the home screen and use the UP/DOWN arrow buttons to scroll through the list. If there are no warnings, only the regular home screens will appear.

When a warning is detected an audible "chirp" will sound and the warning indicator icons in the lower right hand corner of the LCD display will sequentially flash between the exclamation mark (!) and the UP/DOWN arrow characters (▲▼). This indicator is meant to notify staff that the bed has detected a warning condition and that attention is required.

IMPORTANT: This indicator will continue to flash until the warning condition has been appropriately addressed.



Each warning screen is numbered and contains a description of the cause of the warning. This is to aid in troubleshooting (if required). Refer to page 127 for a list of warnings.

Escape Function

Press the 0.0/ZERO button to return back to or "escape" to the home screen. This function can be performed at any time in any menu option screen.

IMPORTANT: No settings will be changed if no selections were made prior to pressing the 0.0/ZERO button.

Automatic Return Home Feature

To help staff with menu navigation, an automatic **"return home"** feature has been included.

How it works:

- After 1 minute of keypad inactivity, the LCD display will automatically enter "sleep" mode. No unselected change to any setting in any menu option screen will occur (i.e.: if a setting change attempt has been abandoned).
- Pressing the ON/ENTER button after the LCD display enters "sleep" mode will "wake up" the LCD display at the home screen.

The automatic "return home" feature will work from any menu option screen.

IMPORTANT: No settings will be changed if no selections were made prior to LCD display going to "sleep".

NOTE:	The LCD display **WILL NOT** function or become illuminated when bed is operating under battery power. This is to conserve battery power for emergency functions.

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4.2 Patient Weigh Scale

All Spirit Select™ beds are equipped with an integral scale to facilitate the weighing of patients while in the bed. The scale is always activated and will display the patient's weight in either kilograms (KG) or pounds (LB) depending upon which unit of measure has been set for patient weight display. **The factory default for patient weight display is imperial pounds (LB).** This setting can be changed in the Maintenance Menu.

The Spirit Select™ scale is very sensitive. The patient can be weighed in any bed position but patient weight will be determined and displayed most accurately when the bed is in the flat position with nothing touching the bed and the bed is not contacting the wall, patient station, or any other equipment.

ACCURACY: The Spirit Select™ scale system has an accuracy of ±3 lbs (1.4 kg) for patients weighing 50 to 110 lbs (22.7 to 49.9 kg) and ±3% of the total patient weight for patients weighing 110 to 500 lbs (49.9 to 226.8 kg). The specified scale accuracy pertains to Mattress Deck Heights from 17 in (431.8 mm) to 34 in (863.6 mm) in the horizontal position.

⚠ WARNING

The scale output is **NOT** intended to be used to determine diagnosis or treatment.

⚠ CAUTION

To ensure the accuracy of the scale and alarms, keep the area around and/or under the bed open and free of obstructions and/or equipment.

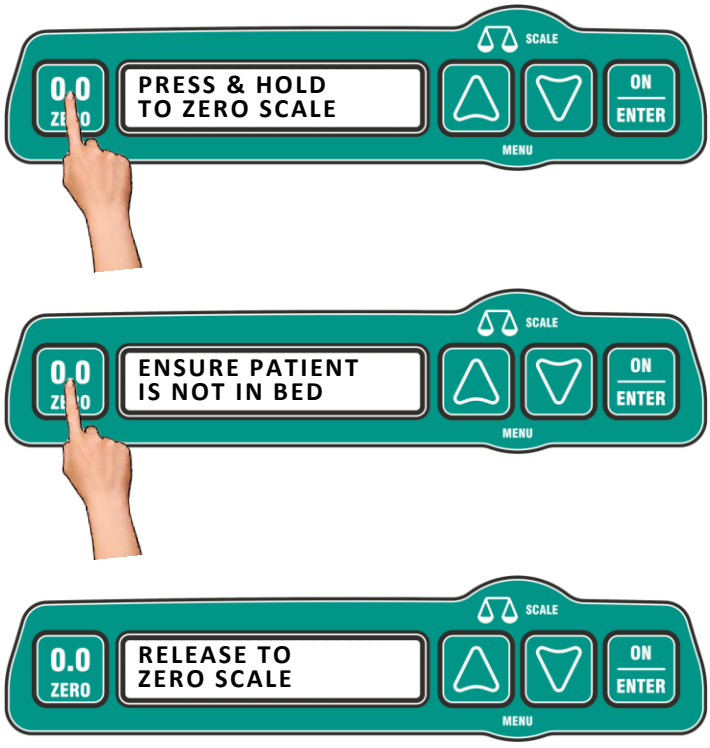
To ensure optimal scale accuracy, CHG Hospital Beds recommends that the siderails be fully raised/closed and locked/latched in the UP position before reading patient weight.

Zeroing the Scale (Establish Tare Value)

LB units used for this example

1. **Press-and-hold** the 0.0/ZERO button for 3 seconds. During this period, a message will be displayed to remind staff that the patient must not be in the bed while attempting to zero the scale.
2. Release the 0.0/ZERO button immediately when instructed.
3. ***DO NOT TOUCH BED*** during the zeroing process.
4. Ensure that the home screen is displaying a weight of 0.0 LB before allowing the patient to enter the bed.

IMPORTANT: DO NOT zero the scale with a patient in the bed. This will result in a zero patient weight being displayed. If the scale is accidentally zeroed with a patient on the bed, remove patient from bed, re-zero scale and return patient to bed.



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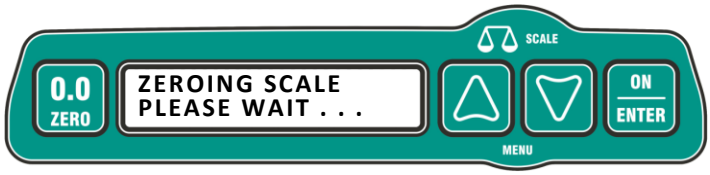
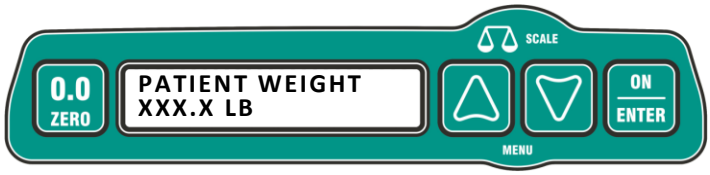
If an accidental attempt to zero the scale is initiated with the patient in the bed, simply release the 0.0/ZERO button when the reminder message is displayed. **IMPORTANT:** Make sure that all necessary equipment and linens are on the bed prior to zeroing the scale. Placing additional items on the bed or removing items from the bed after the zeroing process will result in an inaccurate patient weight being displayed.	 SEVERAL SECOND DELAY ▼ 
IMPORTANT: The scale cannot be zeroed if the bed has been placed in any Trendelenburg or Reverse Trendelenburg position. Ensure that the bed has been restored to fully horizontal and displaying 0° TREND or rev.TREND angle before attempting to zero the scale. Refer to page 49 for instructions.	
IMPORTANT: The scale cannot be zeroed if the Bed Exit Alarm has been armed. Ensure that the Bed Exit Alarm has been disarmed before attempting to zero the scale. Refer to page 79 for instructions.	

NOTE:	CHG Hospital Beds recommends that the bed is zeroed prior to use by each new patient and patient weight change is zeroed once the new patient enters the bed.

NOTE:	Zeroing the scale will override any adjustments made to patient weight.

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4.3 Patient Weight Scale OIML BEDS ONLY

Some Spirit Select™ beds may be equipped with an OIML Certified integrated scale to facilitate the weighing of patients while in the bed. The scale is always activated and will display the patient's weight in kilograms (kg). The patient can only be weighed in the weighing position (bed level and within height range) to ensure scale accuracy. The caregiver will be notified if the bed is outside of this weighing position.

ACCURACY: The Spirit Select™ with OIML Certified integrated scale system has a maximum permissible error in service of ±0.5 kg.

⚠ CAUTION

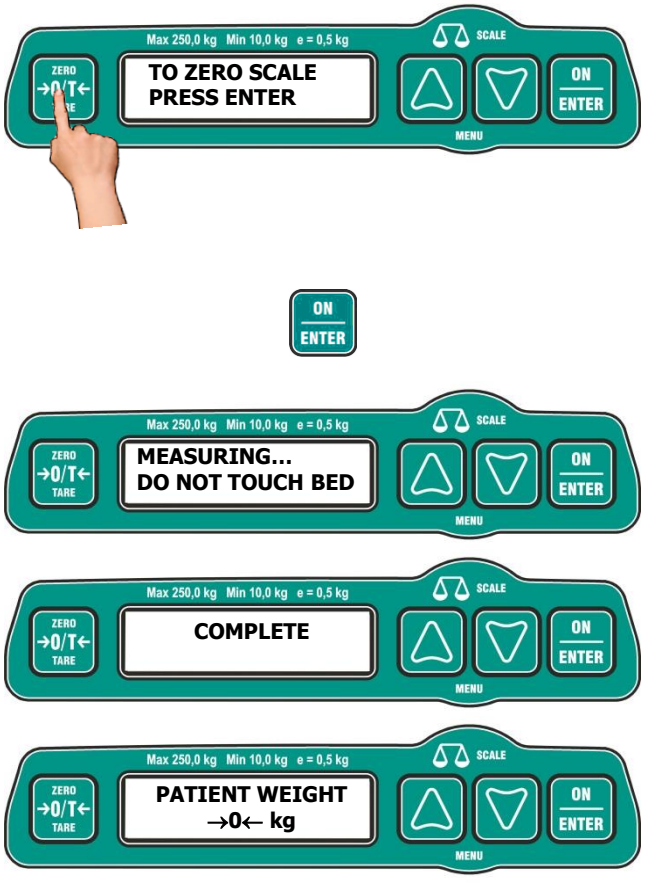
To ensure the accuracy of the scale and alarms, keep the area around and/or under the bed open and free of obstructions and/or equipment.

To ensure optimal scale accuracy, CHG Hospital Beds recommends that the siderails be fully raised/closed and locked/latched in the UP position before reading patient weight.

Zeroing the Scale

Upon receiving your new Spirit Select™ bed, the scale must be zeroed. This process should also be performed whenever a mattress is removed from the bed.

5. Ensure that there is no mattress, linens, equipment or other weight on the bed
6. **Press-and-hold** the [**ZERO→0/T←TARE**] button for 1 second. LCD will display **TO ZERO SCALE PRESS ENTER**
7. Press ENTER
8. ***DO NOT TOUCH BED*** during the zeroing process.
9. Ensure that the home screen is displaying a weight of **→0← kg** before installing or replacing a mattress.



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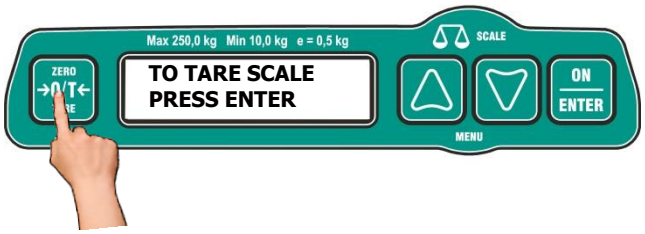
Establish a Tare Value

1. Add a mattress, linens and/or standard equipment to the bed
2. **Press-and-hold** the [**ZERO→0/T←TARE**] button for 1 second. LCD will display **TO TARE SCALE PRESS ENTER**
3. Press ENTER
4. ***DO NOT TOUCH BED*** during the tare process.
5. Ensure that the home screen is displaying a weight of **→0← kg N** before allowing the patient to enter the bed.



IMPORTANT: DO NOT tare the scale with a patient in the bed. This will result in a zero patient weight being displayed. If a tare is performed accidentally with a patient on the bed, remove patient from bed, re-tare scale and return patient to bed.

If an accidental attempt to tare the scale is initiated with the patient in the bed, simply tap the [**ZERO→0/T←TARE**] button to exit the scale tare.

IMPORTANT: Make sure that all necessary equipment and linens are on the bed prior to a tare process being performed. Placing additional items on the bed or removing items from the bed after a tare process will result in an inaccurate patient weight being displayed.

IMPORTANT: the letter N represents NET weight and is used to signify that a tare has been properly established

IMPORTANT: The scale cannot be tare/zeroed if the bed has been placed in any Trendelenburg or Reverse Trendelenburg position. Ensure that the bed has been restored to fully horizontal and displaying 0° TREND or revTREND angle before attempting to tare/zero the scale. Refer to page **49** for instructions.

IMPORTANT: The scale cannot be tare/zeroed if the bed is below the weighing position. Using the BED UP key, restore the bed to the weighing position. When the bed has been returned to a position that satisfies the weighing position, the LCD screen will display **TO TARE SCALE PRESS ENTER**

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IMPORTANT: The scale cannot be tare/zeroed if the bed is above the weighing position. Using the BED DOWN key, restore the bed to the weighing position. When the bed has been returned to a position that satisfies the weighing position, the LCD screen will display **TO TARE SCALE PRESS ENTER**	
IMPORTANT: if the bed exit alarm is armed, performing a zero/tare operation will automatically disarm it.	

NOTE:	CHG Hospital Beds recommends that a tare value is established prior to use by each new patient and patient weight change is zeroed once the new patient enters the bed.

NOTE:	Establishing a tare value will override any adjustments made to patient weight.

Special Scale Messages	
DESCRIPTION	DISPLAY
1. The scale is only rated to measure gross weights 10.0 kg and 254.5 kg. The current gross weight is less than 10 kg.	
2. The scale is only rated to measure gross weights 10.0 kg and 254.5 kg. The current gross weight is MORE than 254.5 kg.	
3. The current weight is within 0.125 kg of 0.0 kg.	
4. The weight displayed is a NET WEIGHT meaning that either a Tare or an equipment change has taken place	

4.5.1 Calibration OIML BEDS ONLY

All OIML Certified beds come factory shipped with the scale in a calibrated state. Should a calibration need to be performed, contact ***CHG Hospital Beds' Customer Service: +01 (519) 963-4010 or Toll Free 1-866-516-5446*** for further instructions.

4.5.2 Scale Accuracy Verification

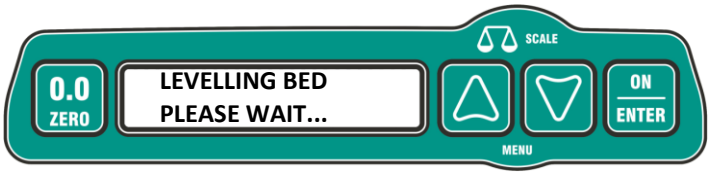
Scale accuracy verification should be performed at an interval determined by the end user. Scale accuracy verification should only be performed by trained users

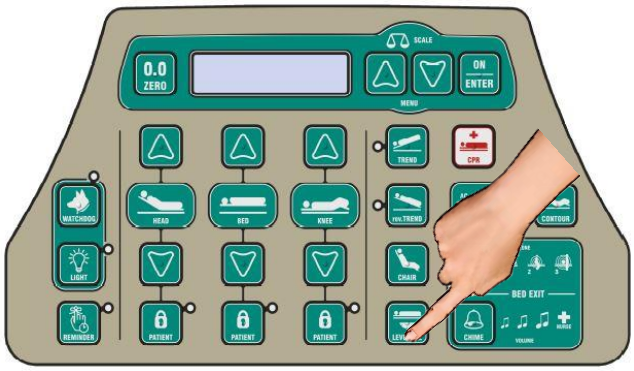
4.4 Level All Function

All Spirit Select™ beds are equipped with a Level All Function.

Press-and-hold the LEVEL ALL button to simultaneously flatten both the head and foot sections of the mattress deck and to return the bed frame to a horizontal position (parallel with the floor).

Bed motion will stop automatically when both sections of the mattress deck have been fully flattened and the bed frame is horizontal.





4.5 Bed Exit Feature

The enhanced footboard staff control on Spirit Select™ beds is equipped with an integral bed exit feature to help monitor and report patient activity with audible and/or Nurse/Priority Call alarms.

IMPORTANT: This feature is not intended to replace patient monitoring by staff.

Three Zone Bed Exit

If equipped, The Bed Exit Alarm can be set to three different sensitivity levels (zones) corresponding to the level of monitoring a patient requires.

The Bed Exit Alarm can be set to produce an audible bed alarm (three different volume settings) or to send a Nurse/Priority Call alarm or it can be set to produce both audible and Nurse/Priority Call alarms.

Single Zone Bed Exit

If equipped, The Bed Exit Alarm can be set to a single sensitivity level. This single zone setting is intended as a Bed Exit Alarm.

The Bed Exit Alarm can be set to produce an audible bed alarm (three different volume settings) or to send a Nurse/Priority Call alarm or it can be set to produce both audible and Nurse/Priority Call alarms.

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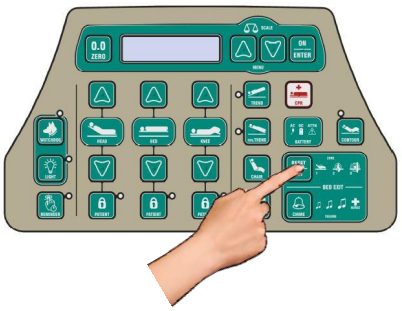
Bed Exit Alarm Arming

To arm the Bed Exit Alarm (Three Zone):

1. Press the RESET/SET button to scroll through the alarm zones.
    - Zone 1 – Alarm with **ANY** movement
    - Zone 2 – Alarm only when patient is about to exit bed
    - Zone 3 – Alarm only when patient exits bed
2. When the desired alarm zone has been selected, the RESET/SET button and the selected alarm zone icon will remain illuminated to indicate that the bed exit alarm has been activated.
3. After a delay of several seconds an audible "chirp" will also sound to indicate that the Bed Exit Alarm has been armed.

IMPORTANT: The Bed Exit Alarm can ONLY be armed if there is weight on the bed (20lbs [9.1kg] minimum). This is intended to prevent false arming of this feature that may otherwise become a nuisance to staff.



To arm the Bed Exit Alarm (Single Zone):

1. Press the RESET/SET button to turn on the alarm.
2. The RESET/SET button and the Bed Exit Alarm icon will remain illuminated to indicate that the bed exit alarm has been activated.
3. After a delay of several seconds an audible "chirp" will also sound to indicate that the Bed Exit Alarm has been armed.

IMPORTANT: The Bed Exit Alarm can ONLY be armed if there is weight on the bed (20lbs [9.1kg] minimum). This is intended to prevent false arming of this feature that may otherwise become a nuisance to staff.

Bed Exit Alarm Disarming

To disarm the Bed Exit Alarm (Three Zone):

- Press the RESET/SET button to scroll through the three alarm zones.
- When the RESET/SET button and no alarm zone icons are illuminated the Bed Exit Alarm has been disarmed.

IMPORTANT: The Bed Exit Alarm can ONLY be disarmed using the RESET/SET button.

The factory default sensitivity level setting is Zone 1. The factory default alarm chime setting is audible chime (high volume) AND Nurse/Priority Call alarm. To change these settings and/or to change the chime tone, refer to the following sections.

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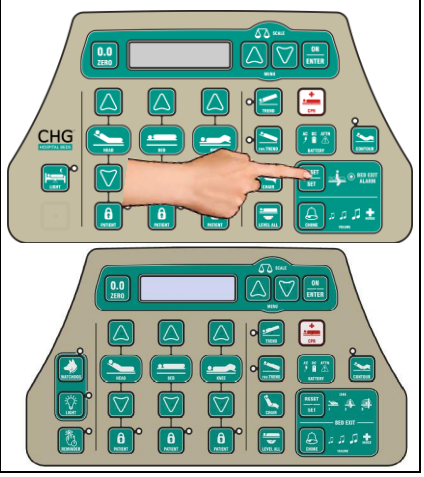
To disarm the Bed Exit Alarm (Single Zone):

- Press the RESET/SET button to scroll through until the Bed Exit Alarm icon is no longer illuminated.
- When the RESET/SET button and no alarm zone icons are illuminated the Bed Exit Alarm has been disarmed.

IMPORTANT: The Bed Exit Alarm can ONLY be disarmed using the RESET/SET button.



Bed Exit Alarm Volume Selection

To set the desired Bed Exit Alarm volume, the Bed Exit Alarm must first be armed. Press the RESET/SET button to arm the Bed Exit Alarm.

- Press the CHIME button to begin scrolling through the alarm volume settings. There are three alarm volume settings (low, medium, high) and a Nurse/Priority Call setting.

Selecting alarm volume:

- Scroll through the alarm volume settings one time will allow staff to select the desired alarm volume setting **OR** the Nurse/Priority Call alarm that is appropriate.

Selecting alarm volume AND Nurse/Priority Call:

- Scroll through the alarm volume settings a second time will allow staff to select the desired alarm volume setting **AND** the Nurse/Priority Call alarm that is appropriate.

When the desired Bed Exit Alarm volume is selected, the CHIME button and the selected alarm volume and/or Nurse/Priority Call icon(s) will remain illuminated.

IMPORTANT: The Nurse Call and Priority Call alarms annunciated by the bed can be separated to meet the alarm notification needs of your healthcare facility. This setting can be changed in the Maintenance Menu.

Bed Exit Alarm Chime Tone Selection

From the BED EXIT Menu:

2. Press the UP/DOWN arrow buttons to scroll to the ALARM CHIME screen.
3. Press the ON/ENTER button to enter this menu. The current Bed Exit Alarm chime tone will be shown.
4. Press UP/DOWN to scroll through available Bed Exit Alarm chime tones. Each chime tone will sound.
5. Press ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that Bed Exit Alarm chime tone has been changed.

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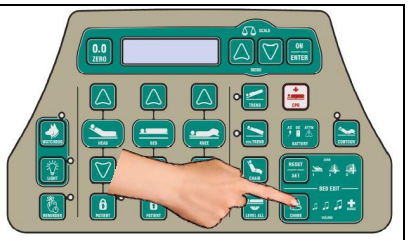
Short Cut Key:	**Press-and-hold** the Chime button for 3 seconds to jump directly to this selection in the Bed Exit Menu.	

Alarm Silencing

Zone 3 used for this example ***High Volume AND Nurse/Priority Call used for this example*** Once a Bed Exit Alarm has been triggered, it may be silenced by pressing the RESET/SET button.	
Once the Bed Exit Alarm has been silenced, the RESET/SET or CHIME button icons will flash simultaneously as a visual indicator and reminder to staff that the alarm has been silenced and must be either reset or deactivated. These button icons will flash until the Bed Exit Alarm has been disarmed (by pressing the RESET/SET button or, once the Bed Exit Alarm has been automatically re-armed if this feature is ON.	

Locking Bed Exit Alarm Settings

You may find that your healthcare facility tends to use the same Bed Exit Alarm settings for patients, say, in the same ward and/or requiring the same level of monitoring. If this is the case for your healthcare facility, it may be desirable to lock the Bed Exit Alarm settings.

Locking the Bed Exit Alarm settings will enable one-touch arming of the Bed Exit Alarm feature without the need to:

- Scroll through and then select desired zone.
- Scroll through and then select if alarm chime is audible and if it includes Nurse/Priority Call.

IMPORTANT: For added flexibility, both of the Bed Exit Alarm settings can be locked or the zone and alarm chime settings can be lock separately.

IMPORTANT: Once the Bed Exit Alarm settings have been locked, any attempt to change them by pressing either the RESET/SET and/or CHIME buttons will not be permitted.

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To lock the Bed Exit Alarm settings, the Bed Exit Alarm must first be armed. Press the RESET/SET button to arm the Bed Exit Alarm.

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the LOCK ZONE CHIME screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - OFF
    - ZONE LOCK
    - CHIME LOCK
    - ZONE + CHIME LOCK
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm zone and/or chime tone lock setting has been changed. Press the 0.0/ZERO button to "escape" to the home screen.

Short Cut Key:	**Press-and-hold** the SET/RESET and CHIME button for 3 seconds to jump directly to this selection in the Bed Exit Menu.	

4.5.1 Bed Exit Alarm: Auto Reset

When a patient attempts to exit or does exit the bed (depending upon the zone level selected), the Bed Exit Alarm will be triggered. If the patient returns to their original position on the bed, the Bed Exit Alarm can be set to automatically stop alarming or otherwise announcing the alarm.

Bed Exit Alarm: Auto Reset Functionality

The Bed Exit Auto Reset feature will allow the bed to automatically reset the Bed Exit Alarm without staff needing to press the RESET/SET button after the patient has returned to the bed.

- The Bed Exit Alarm will resume patient monitoring operation with the previous or locked alarm settings (zone and volume/Nurse/Priority Call levels).
- An audible "chirp" will sound to indicate that the Bed Exit Alarm has been reset.

The factory default setting for the Bed Exit Auto Reset is ON. This setting can be changed by following the instructions below.

IMPORTANT: If the Auto Reset feature has been set to OFF (disabled) in the Bed Exit Menu, the Bed Exit Alarm will continue to sound regardless if the patient has returned to the original position or has returned to bed (depending upon the zone level selected) and has ceased all motion.

To Enable/Disable Auto Reset

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the AUTO RESET screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press the UP/DOWN arrow buttons to scroll through available selections:
    - AUTO RESET ON
    - AUTO RESET OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm Auto Reset setting has been changed. Press the 0.0/ZERO button to "escape" to the home screen.

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4.5.2 Bed Exit Alarm: Auto Re-Arm

When a patient attempts to exit or does exit the bed (depending upon the zone level selected), the Bed Exit Alarm will be triggered. Staff may silence the Bed Exit Alarm by pressing the RESET/SET button. Once in this silenced mode, the staff needs to remember to reset the Bed Exit Alarm (by pressing the RESET/SET button) after settling the patient and/or when the patient has returned to the bed.

Bed Exit Alarm: Auto Re-Arm Functionality

The Bed Exit Auto Re-Arm feature will allow the bed to automatically re-arm the Bed Exit Alarm without staff needing to press the RESET/SET button after the patient has returned to the bed.

- The Bed Exit Alarm will re-arm itself after a selected time delay period has elapsed. The Auto Re-Arm feature has three factory set time delay periods to select from: **1, 3, or 9 minute delay**.
- The Bed Exit Alarm will resume patient monitoring operation with the previous or locked alarm settings (zone and volume/Nurse/Priority Call levels).
- An audible "chirp" will sound to indicate that the Bed Exit Alarm has been re-armed.

The factory default setting for Bed Exit Auto Re-Arm is ON with a time delay period of 1 minute. This setting can be changed by following the instructions below.

To Enable/Disable Auto Re-Arm

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the AUTO RE-ARM screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press the UP/DOWN arrow buttons to scroll through available selections:
    - 1 MINUTE DELAY
    - MINUTE DELAY
    - 9 MINUTE DELAY
    - OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm Auto Re-Arm setting has been changed. Press the 0.0/ZERO button to "escape" to the home screen.

If the patient has not returned to the bed after 10 minutes has elapsed then a notification will be displayed to remind staff that the Bed Exit Alarm is still armed but has been silenced.

- Press the RESET/SET button to cancel the Bed Exit Alarm.

The LCD display will automatically return to the home screen.

NOTE:	If the Auto Re-Arm feature has been set to OFF (disabled) in the Bed Exit Menu, these screens will not appear.

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4.5.3 Bed Exit Alarm: Auto Arm

You may find that your healthcare facility tends to set Bed Exit Alarm for most patients. If this is the case for your healthcare facility, it may be desirable to use the Bed Exit Alarm Auto Arm feature.

Bed Exit Alarm: Auto Arm Functionality

The Bed Exit Alarm Auto Arm feature automatically arms the Bed Exit Alarm once a stable weight of 50lbs (22.7kg) or more has been detected by the bed for a period greater than one minute. The Auto Arm feature will use the factory default or locked Bed Exit Alarm settings for Zone and Volume.

The factory default setting for Bed Exit Auto Arm is OFF. This setting can be changed following the instructions below.

To Enable/Disable Auto Arm

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the AUTO ARM screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - AUTO ARM ON
    - AUTO ARM OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm Auto Arm setting has been changed. Press the 0.0/ZERO button to "escape" to the home screen.

Bed Exit Alarm: Auto Arm Pause Functionality **Maximum delay time: 300 seconds**

During patient care, you may wish to temporarily override the Bed Exit Auto Arm feature. For example, if it may be necessary to temporarily position a patient on the bed for a period greater than one minute which will cause the Bed Exit Alarm to automatically arm. As expected any patient motion after the Bed Exit Alarm has automatically armed may trigger a nuisance alarm (depending on the Zone selected).

During such patient care, it is possible to temporarily delay or "pause" the Auto Arm feature for 60, 90 or 120 seconds. A countdown timer is displayed. During the final 10 seconds of this countdown a series of warning "chirps" will sound. While the countdown is in progress, the Bed Exit Alarm will not Auto Arm.

When the countdown is nearing its end, Auto Arm Pause can be extended (up to 5 additional minutes, or 300 seconds, may be added). While the Auto Arm Pause countdown is in progress, the countdown can be set to zero at any time, re-establishing the normal Auto Arm feature.

To set an Auto Arm Pause, the Auto Arm feature must first be enabled. To enable Bed Exit Alarm Auto Arm, refer to the previous section. **Maximum delay time: 300 seconds**

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to the AUTO ARM PAUSE screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press the UP/DOWN arrow buttons to add/remove delay time in 30 second increments.
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound and ***the countdown will begin immediately***

During the final 10 seconds of the delay countdown, a chirp will sound every second as notification that the Auto Arm Pause is about to end and that the Bed Exit Alarm Auto Arm functionality is about to resume. Press the 0.0/ZERO button to "escape" to the home screen.

4.5.4 Bed Exit Light

The underbed light can also be set to operate as an automatic Bed Exit Light. The Bed Exit Light improves nighttime visibility around the bed and in the room providing an increased level of patient safety. When the Bed Exit Light is on, the underbed light automatically switches on just prior to the patient exiting the bed. The underbed light will remain illuminated until the patient returns to the bed, and automatically switches off after a short delay. If the patient does not immediately return to bed, the underbed light automatically shuts off after 15 minutes has elapsed.

The factory default setting for the Bed Exit Light is ON. This setting can be changed by following the steps below.

To Enable/Disable Bed Exit Light

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the BED EXIT LIGHT screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - BED EXIT LIGHT ON
    - BED EXIT LIGHT OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Light setting has been changed. Press the 0.0/ZERO button to "escape" to the home screen.

4.5.5 Bed Exit Alarm History

When the Bed Exit Alarm is armed, the bed automatically records the number of times the Bed Exit Alarm has been triggered. This data is stored as the Bed Exit Alarm History.

To View/Reset Bed Exit Alarm History

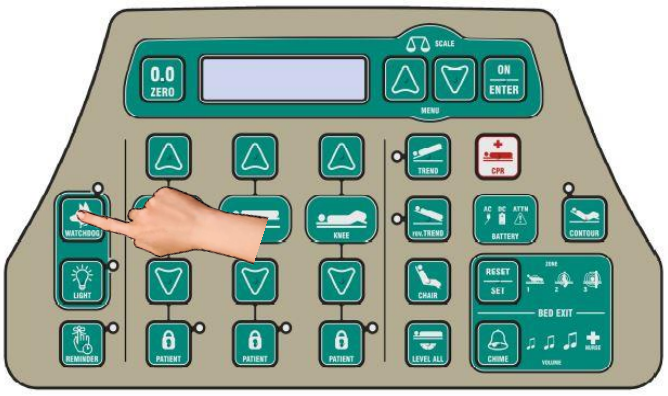
From the BED EXIT Menu:

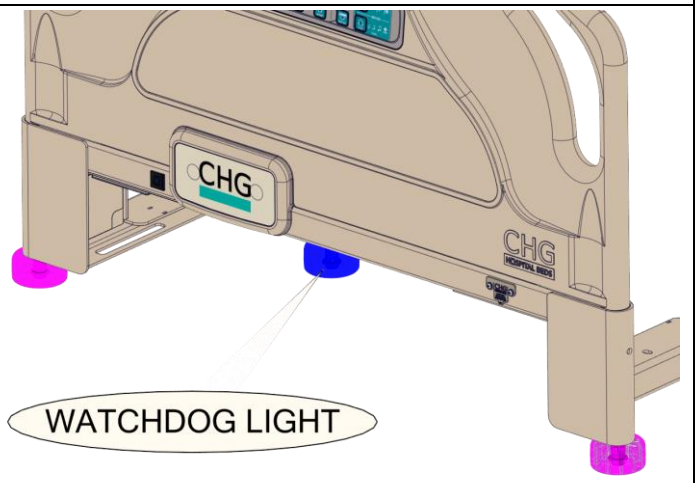
1. Press the UP/DOWN arrow buttons to scroll to the ALARM HISTORY screen.
2. Press the ON/ENTER button to enter this menu option. The BED EXIT ALARM HISTORY will display the number of times that the Bed Exit Alarms has been triggered.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - DON'T RESET
    - RESET NOW
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm History has been reset (if RESET NOW is selected). Press the 0.0/ZERO button to "escape" to the home screen.

4.6 Watchdog™ Bed Monitoring System

If your Spirit Select™ bed has been equipped with the optional Watchdog Bed Monitoring System, the bed will be outfitted with a bumper light installed beneath the footboard in the center of the frame and a unique footboard staff control as shown below. The Watchdog Bed Monitoring System has the following modes of operation:





⚠ CAUTION

Always keep watchdog light free and clear of all obstructions. Ensure the watchdog light is always visible and not obstructed by linens, equipment, etc.

4.6.1 Always On™ Monitoring

The Watchdog feature is used to monitor and indicate if a change has been made to the bed position or the status of important bed features. On bed power up, the bed defaults to "prepare bed for Watchdog arm" which allows the user 10 seconds (after last key press) to set the desired position of the bed. The Watchdog light will illuminate BLUE. The bed is now being monitored for bed position changes and important bed features.

A stationary bed is critical to patient safety. Therefore the status of the caster lock (brake) is continuously monitored. Whenever the caster lock (brake) is not engaged, the Watchdog lights will be illuminated Solid RED.

IMPORTANT: Continuous monitoring by this WATCHDOG mode is only possible when the bed is running on AC power (plugged into a wall outlet).

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4.6.2 Bed Position/Status Monitoring

To adjust the position of the bed, simply disarm the Watchdog by pressing-and-holding the WATCHDOG key, then releasing the key when prompted. The LCD will display a countdown timer of 10 seconds. The timer will reset every time a change is made to the bed. Once all desired bed changes are made, simply allow the countdown timer to elapse. Watchdog Monitoring is now re-established to the new bed position.

To Adjust the Bed Position:

From the footboard staff control:

1. **Press-and-hold** the WATCHDOG button for ~4 seconds.
2. Release the WATCHDOG button when the "PREPARE BED FOR WATCHDOG ARM 10s" screen appears on the LCD display.
3. The Watchdog light will turn off and an audible chirp will sound to indicate that the Bed is now ready to be repositioned. A countdown timer will be displayed on the LCD screen
4. Make all necessary changes to the bed as required. The countdown timer will reset after each button press.
5. Once the desired changes have been made, simply allow the countdown timer to elapse.
6. The Watchdog Light will illuminate BLUE after the timer has elapsed.

PRESS-AND-HOLD FOR 4 SECONDS ▼

Once the Bed Position/Status Monitoring has been auto-armed, any change to the bed (see following table) will be indicated by Watchdog lights turning yellow or red. The WATCHDOG button will also flash to indicate a change has occurred.

Right foot siderail change used for this example

To identify what has changed:

- **TAP** (momentary press-and-release) the WATCHDOG button. Changes will be displayed on the LCD screen.

Bed Position	Watchdog Lights Will Turn Yellow When…
Head Angle	Angle changes of approximately ± 5°
Knee Angle	Angle changes of approximately ± 3°
Bed Elevation	Height changes of approximately ± 3 inches

Bed Status	When…	Watchdog Lights Will Be…
Obstruction Sensors	An obstruction is present/detected	Flashing YELLOW
Patient Lock-Outs	Any change to settings has occurred	Solid YELLOW
Rail Locks	A change to any rail position has occurred	Solid YELLOW

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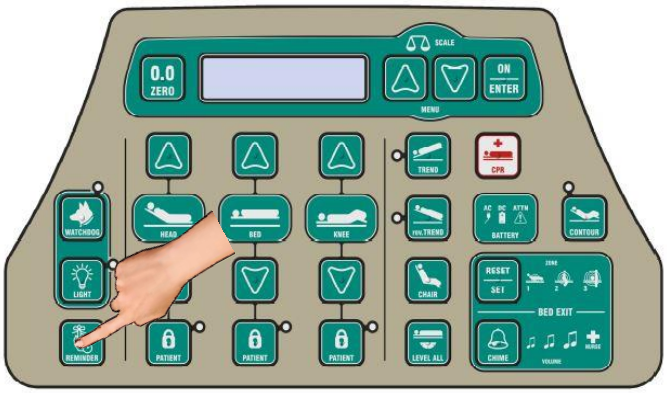
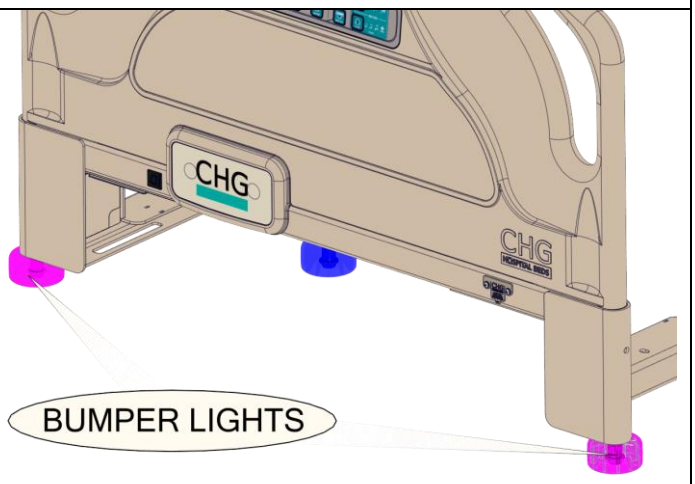
To View Bed Position/Status	
At any time you can confirm Watchdog Bed Position/Status: • **Tap** (momentary press-and-release) the WATCHDOG button. Confirmation screen will be displayed on the LCD screen.	

4.6.3 Nurse Reminder™

To provide the best patient care possible, staff may wish to use the Nursing Reminder™ to identify if a particular patient/bed requires attention (example: patient requires time dependent repositioning or a bed needs a change of linens, etc.).





To Set the Nurse Reminder™:

- Simply **Press** the REMINDER button.
- The LCD will display "NURSING REMINDER OFF"
- Use the MENU buttons to scroll through the available time intervals
- The Nursing Reminder can be set at 15 minute intervals from 1 minute to 3 hours maximum
- When the desired time is display, Press the ON|ENTER button to select

The Bumper lights will illuminate BLUE and an audible chirp will sound to indicate that the Nurse Reminder™ has been set.

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Nurse Call Trigger:

The Nursing Reminder can be set to trigger a nurse call (if connected) to a central nursing station. After the desired time is selected, the LCD display will ask the user if a nurse call is required.

- Use the MENU buttons to select the desired state
  - ON
  - OFF
- Press the ON|ENTER to confirm selection

Once the reminder countdown has expired, the Bumper lights will turn Solid PURPLE and the REMINDER button will flash.

IMPORTANT: A Nurse Call can only be sent if the bed is properly connected to a nurse call system.

Once the reminder countdown has expired, Nurse Reminder™ will need to be cleared to turn off the Bumper lights.

To Clear the Nurse Reminder™:

- **Press** the REMINDER button.
- Set the Nurse Reminder to OFF and press the ON|ENTER button

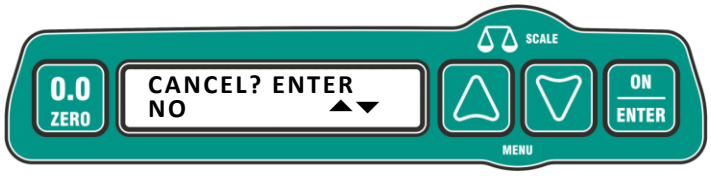
An audible chirp will sound to indicate that the Nurse Reminder™ has been cleared.

To Cancel Remaining Reminder Countdown

At any time you can cancel the Nurse Reminder™.

- **Press** the REMINDER button.
- The "CANCEL?" screen will appear.
- The option "NO" will be displayed on screen
- Use the UP/DOWN arrow buttons to change the option to "YES"
- Press ON/ENTER button to select the desired state.

An audible chirp will sound to indicate that the Nurse Reminder™ countdown has been cancelled.



NOTE:	While in the reminder countdown selection screen, use the UP/DOWN arrow buttons to set the reminder countdown to 0 minutes to clear the Nurse Reminder™.

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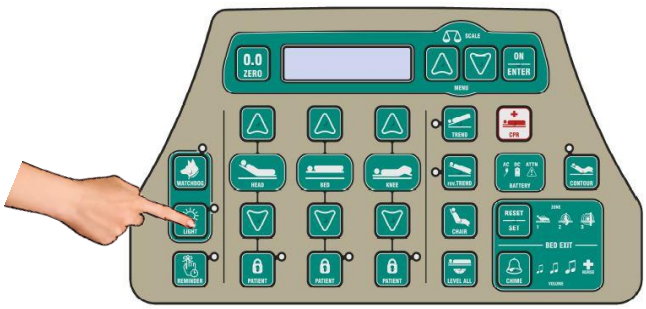
4.6.4 Available Light Configurations

The Bumper, Watchdog and Underbed lights can be adjusted to enhance the room lighting. Light colour and intensity can be changed to various configurations.



SELECTION	SETTINGS							
A. UNDERBED LIGHTS	OFF		LOW		MEDIUM		HIGH	
B. BUMPER LIGHTS	LT BLUE	LOW HIGH	WHITE	LOW HIGH	PURPLE	LOW HIGH	OFF	
C. WATCHDOG LIGHTS	OFF		LOW		MEDIUM		HIGH	
D. REMINDER LIGHT	LOW				HIGH			
E. BED EXIT LIGHT	ON				OFF			

To Adjust Light Configurations:

- **Press-and-hold** the LIGHT button for 4 seconds. The "HOLD KEY FOR LIGHTS MENU" screen will appear.

Light Blue Nightlights used for this example

- Release the LIGHT button when the "A. UNDERBED LIGHT" screen appears on the LCD display.
- Use the UP/DOWN arrow buttons to scroll through the available Light Configurations.
- Press the ON/ENTER button to ENTER the desired selection.
- Use the UP/DOWN arrow buttons to cycle through the available lights settings.

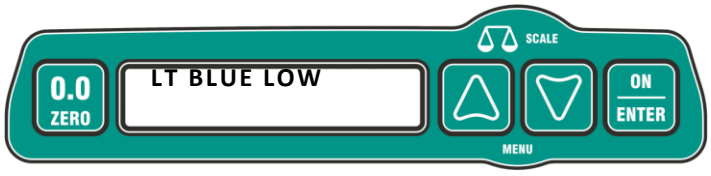
The Bumpers, Watchdog or Underbed lights (depending on which selection menu) will change to match the current selection on the LCD display to allow the user to see the desired change before making the selection.

- Press the ON|ENTER button to select the desired light setting.

PRESS-AND-HOLD FOR 4 SECONDS ▼

PRESS THE UP/DOWN ARROW BUTTONS ▼

PRESS THE ON|ENTER BUTTON ▼



NOTE:	The WATCHDOG feature is only operational when the bed is running on AC power (plugged into a wall outlet).

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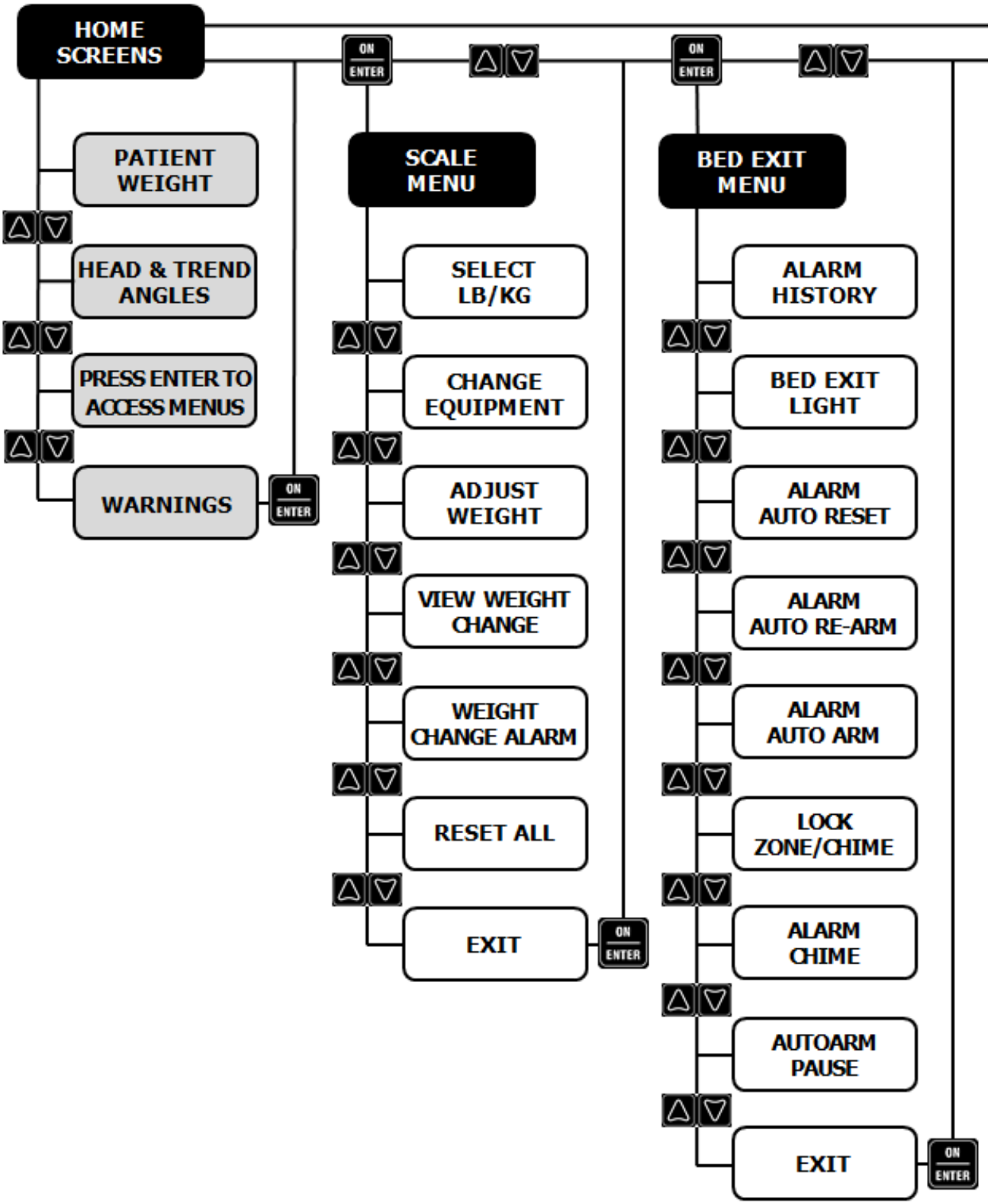
Menu Navigation



NOTE:	Depending upon the version of firmware that your Spirit Select™ bed is equipped with, the menus and menu options may have different titles and/or the menus may contain different and/or additional menu options.

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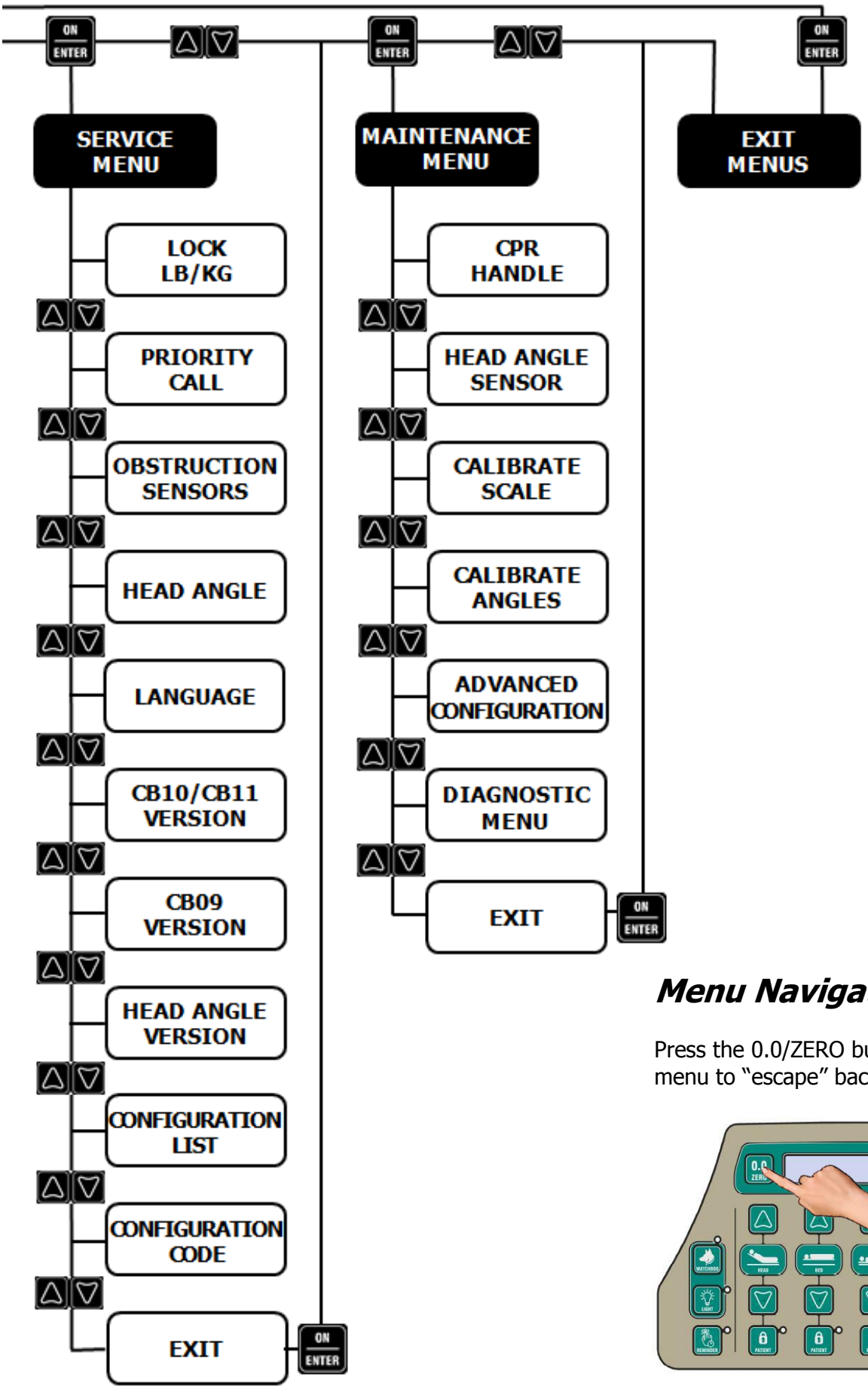
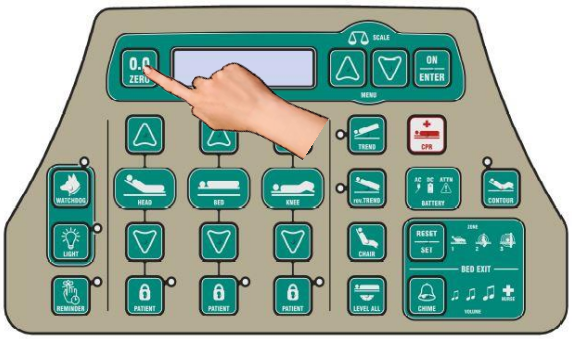


Menu Navigation Tip!

Press the 0.0/ZERO button at any time in any menu to "escape" back to the home screen.



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4.7 Scale Menu

A Scale Menu is available on Spirit Select™ beds. The Scale Menu includes menu options that are dirrectly related to scale operation and offer increased functionality of the bed.

4.7.1 Selecting Patient Weight Display Units

The units that the patient weight is displayed in can be changed to suit the needs of your healthcare facility.

Selecting Patient Weight Display Units

From the Scale Menu:

1. Press the UP/DOWN arrow buttons to scroll to the SELECT LB/KG screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - LB
    - KG
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the LCD Display units have been selected. Press the 0.0/ZERO button to "escape" to the home screen.

4.7.2 Changing Equipment

During routine patient care, there may arise the need to add/remove equipment (medical devices, linens, etc) to/from the bed without disturbing the patient (ie: having to patient leave the bed). Any items added to or removed from the bed will impact the displayed patient weight.

Using the Change Equipment functions, staff can add required equipment to the bed or remove unneeded equipment from the bed at any time when the patient is on the bed.The displayed patient weight will not reflect this weight increase or decrease with the addition or removal of equipment to/from the bed when this procedure is performed.

Making an Equipment Change

From the Scale Menu:

1. Press the UP/DOWN arrow buttons to scroll to the CHANGE EQUIPMENT screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press the ON/ENTER button to begin the equipment change process. The bed will take a snapshot of the current bed weight (patient, mattress, equipment, lines, etc.).
4. Perform desired equipment addition or removal.
5. Press the ON/ENTER button when done. The bed will take a second snapshot of the new bed weight. The difference between the first and second weight snapshots will simply be ignored by the scale and will not be reflected in the displayed patient weight.

An audible chirp will sound to indicate that the equipment change has been successfully made. Press the 0.0/ZERO button to "escape" to the home screen.

HINT: *Use this feature when adding additional pillows and/or linen to the bed.*

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4.7.3 Adjusting Patient Weight

Using the Adjust Patient Weight function, staff can adjust the displayed patient weight as necessary, at any time when the patient is on the bed, without disturbing the patient (ie: having to patient leave the bed).

The displayed patient weight will reflect a weight increase or decrease when this procedure is performed.

Making an Adjustment to Patient Weight

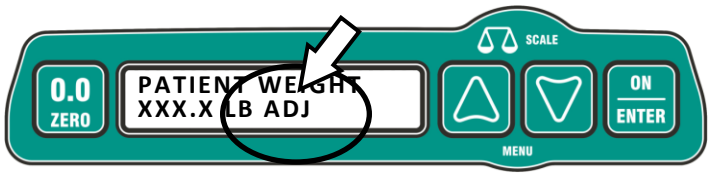
From the Scale Menu:

1. Press the UP/DOWN arrow buttons to scroll to the ADJUST WEIGHT screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press the ON/ENTER button to begin patient weight adjustment process.
4. Press the UP/DOWN Arrow buttons to make adjustments to patients displayed weight. Each time the UP/DOWN Arrow buttons are pressed, an increase/decrease of 0.5 LB or 0.5 KG (depending upon which unit has been set for patient weight display) will register.
    - The UP Arrow button will increase the patient's displayed weight.
    - The DOWN Arrow button will decrease the patient's displayed weight.
5. Press the ON/ENTER button to input the adjustment after the desired increase/decrease has been made.

An audible chirp will sound to indicate that the patient weight adjustment has been successfully made. Press the 0.0/ZERO button to "escape" to the home screen.

The patient display weight will now display the actual patient weight plus this inputted increase ***OR*** the actual patient weight minus this inputted decrease.

IMPORTANT: To inform staff that the patient's weight has been adjusted, "ADJ" will be displayed next to the patient weight value on the home screen.



NOTE: Zeroing the scale will override any adjustments made to patient weight.

4.7.4 View Weight Change

During routine patient care, there may be the need to monitor changes in patient weight.

Using the View Weight Change function, staff can easily observe and record these changes. When the View Weight Change function is set, the bed takes snapshots of the patient's weight and stores this value as the original patient weight. If the bed detects any change in patient weight, this changed amount will be displayed on the home screen.

Enable/Disable View Weight Change

From the Scale Menu:

1. Press the UP/DOWN arrow buttons to scroll to the VIEW WEIGHT CHANGE screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press the UP/DOWN arrow buttons to scroll between the available options:
    - OFF
    - ON/RESET

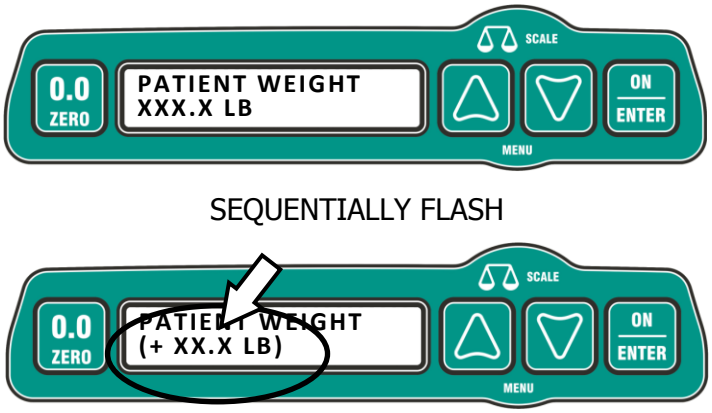
An audible chirp will sound to indicate that the view weight change feature has been enabled. Press the 0.0/ZERO button to "escape" to the home screen.

Selecting ON/RESET will begin the VIEW WEIGHT CHANGE process. The scale will take a snapshot of the current bed weight (patient, mattress, equipment, lines, etc.) and use this value to compare patient weight changes.

Patient Weight GAIN used in this example

Any weight gain or loss is experienced by the patient will be displayed within parenthesis accompanied with either a "+" or "-" sign to indicate patient weight gain or loss respectively.

The home screen which will now sequentially flash to display the original "snapshot" patient weigth and the current, real time weight change that the patient has experienced.



4.7.5 Weight Change Alarm

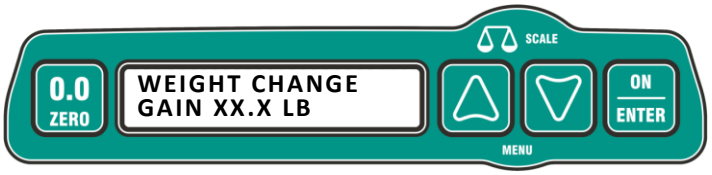
When the Weight Change Alarm function is set, the bed takes snapshots of the patient's weight and stores this value. Weight change is a time related event and is assumed to occur gradually. If the difference in the patient's weight equals or exceeds the set amount after an elapsed period of an hour, a weight change alarm is triggered.

If the difference is significantly greater than the set amount, the bed assumes that this occurrence is not related to patient weight change (example: a healthcare practitioner or family member is likely sitting on and/or something has been placed on the bed without using the "Change Equipment" feature – refer to previous section for instructions). In this case the bed simply ignores this change and a patient weight change alarm will not be triggered in this instance.

Patient Weight GAIN used in this example

When a weight change alarm is triggered, a warning message will be displayed and the bed will also send a priority call via the Nurse Call system (if connected). There is no audio component to this alarm.

Press the ON/ENTER button to cancel that the weight change alarm. The weight change alarm settings will also be cleared.



Setting a Weight Change Alarm

From the Scale Menu:

1. Press the UP/DOWN arrow buttons to scroll to the WEIGHT CHANGE ALARM screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press the UP/DOWN arrow buttons to set the WEIGHT CHANGE ALARM trigger weight GAIN/LOSS. Each time the UP/DOWN Arrow buttons are pressed, an increase/decrease of 0.5 LB or 0.5 KG (depending upon which unit has been set for patient weight display) will register.
    - The UP Arrow button will increase the alarm trigger weight.
    - The DOWN Arrow button will decrease the alarm trigger weight.
4. Press the ON/ENTER button when done. The scale will take a snapshot of the current patient weight and store this value.

An audible chirp will sound to indicate that the WEIGHT CHANGE ALARM has been set. Press the 0.0/ZERO button to "escape" to the home screen.

If, after one hour elapses, the bed detects a weight change greater than the set alarm trigger weight, a weight change alarm will be triggered.

- Press the ON/ENTER button to cancel the alarm.
- The Weight Change Alarm can be reset by following the steps above.

4.7.6 Reset All

Reset All Settings – Impact	
Performing a "Reset All" ***WILL*** impact the following settings: ☑ Bed Exit History – *Cleared* ☑ Weight Change Alarm – *Cleared/Disabled* ☑ Weight Change View – *Disabled* ☑ Patient Adjust Weight – *Cleared* ☑ Equipment Change – *Cleared*	Performing a "Reset All" ***WILL NOT*** impact the following settings: ☒ Scale Calibration ☒ Angle Calibration ☒ Any Bed Exit Setting ☒ Obstruction Sensors Enabling/Disabling ☒ Nurse Call/Priority Call Selection ☒ Patient Weight Display Unit Selection ☒ LCD Display Language

Reset All Settings

From the SCALE Menu:

1. Press the UP/DOWN arrow buttons to scroll to the RESET ALL screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - DON'T RESET
    - RESET NOW
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm History has been reset (if RESET NOW is selected). Press the 0.0/ZERO button to "escape" to the home screen.

4.8 Service Menu

A Service Menu is available on Spirit Select™ beds. The Service Menu includes menu options that allow for the bed to be configured to best suit the needs of your healthcare facility. The Service Menu also includes menu options that are not typically accessed on a daily basis and/or are settings that are globally set for the healthcare facilty. Addtionally, in the rare event of component failure and/or malfunction, some bed features can be disabled in the Service Menu to restore bed functionality until the bed can be properly serviced.

4.8.1 Locking LCD Display Units

The units that the patient weight is displayed in can be changed to suit the needs of your healthcare facility. This change can be easily made in the Scale Menu. See previous section for instructions.

Locking LCD Display Units

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the LOCK LB/KG screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - LB
    - KG
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the LCD Display units have been locked. Press the 0.0/ZERO button to "escape" to the home screen.

IMPORTANT: If the LCD Display units have been locked, the unit selection menu option **WILL NOT** appear in the Scale Menu.

4.8.2 Priority & Nurse Call Settings

The Nurse Call and Priority Call alarms annunciated by the bed can be separated to meet the alarm notification needs of your healthcare facility.

Setting Priority & Nurse Call

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the PRIORITY CALL screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - PRIORITY + NURSE CALL
    - PRIORITY ONLY
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Priority/Nurse Call settings have been changed. Press the 0.0/ZERO button to "escape" to the home screen.

NOTE:	Priority & Nurse Call settings can be further tailored. These adjustments can be done in the Maintenance Menu under the ADAVANCED CONFIGURATIONS menu option. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

4.8.3 Obstruction Sensor Settings

In the rare event of component failure and/or malfunction, the obstruction sensor system can be disabled to restore bed functionality until the bed can be properly serviced

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the OBSTRUCTION SENSORS screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - OBSTRUCTION SENSORS ENABLED
    - OBSTRUCTION SENSORS DISABLED
4. Press ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the obstruction sensor operation has been changed. Press the 0.0/ZERO button to "escape" to the home screen. An OBSTRUCTION SENSOR DISABLED warning will now be displayed.

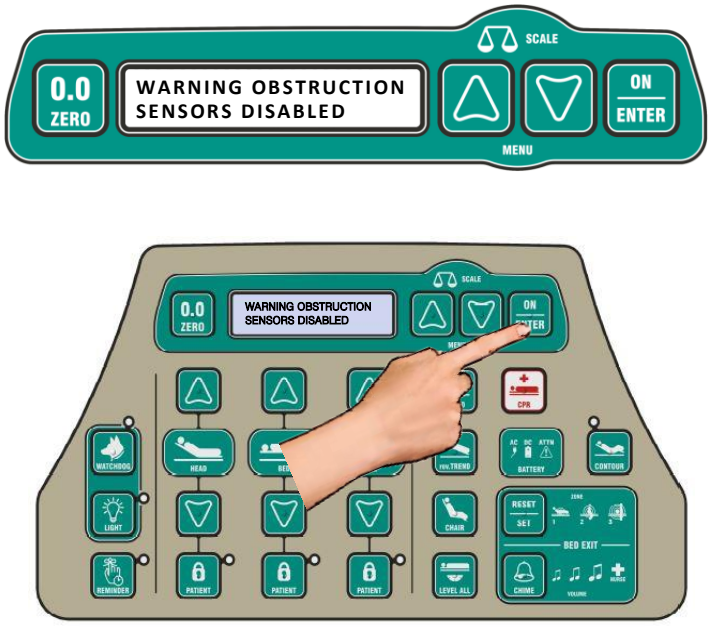
On Spirit Plus™ beds **the factor default setting for obstruction sensors is CONNECTED and OPERATING.** This cannot be changed using the footboard staff control. The obstruction sensors can only be enabled/disabled by connecting/disconnecting the obstruction sensor circuits from the CB10Lite circuit board. Refer to page 133 to identify the two connectors for the obstruction sensor circuits:

- To enable/disable the obstruction sensors, connect/disconnect both of the obstruction sensor circuits from the CB10Lite circuit board respectively.

Disabled Obstruction Sensor Warning

On Spirit Select™ beds, when the obstruction sensors have been disabled and a downward motion of the bed platform (using any of the following: BED DOWN, TREND, rev.TREND, LEVEL ALL, or CHAIR position) is attempted, a warning message will be displayed during bed operation to remind staff that the obstruction sensors have been disabled.

IMPORTANT: There is no warning or indicator on Spirit™ and Spirit Plus™ beds. The bed will continue to operate as though it was not equipped with the optional obstruction sensors.



⚠ WARNING

Disabling the obstruction sensors will disable a major safety device on the bed.

The obstruction sensors should only be disabled in the rare event that normal bed function has been impaired by the malfunction of a component in the obstruction sensing system.

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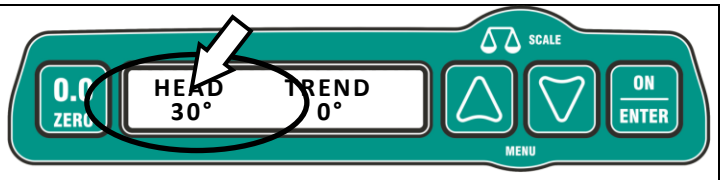
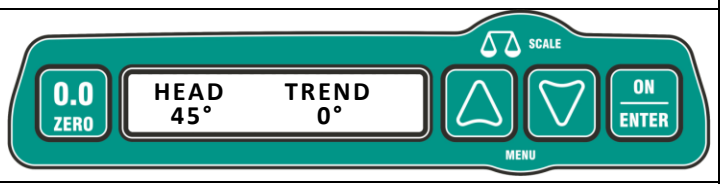
4.8.4 Head Angle Settings

Depending upon the preference of your healthcare facility, it is possible to set the origin for the head angle that is displayed on the second home page of the LCD display.

IMPORTANT: This setting impacts the displayed head angle when the bed is in a Trendelenburg, reversed Trendelenburg, or Chair position (ie: when the bed frame is not parallel with the floor).

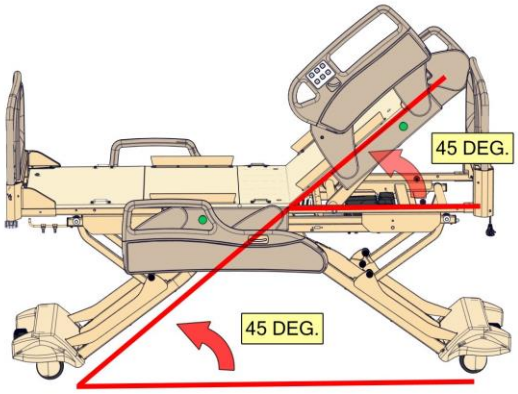


When the bed frame is in the horizontal position, the bed frame is parallel with the floor. In this case, the head angle that is displayed would be the same if either setting was selected.

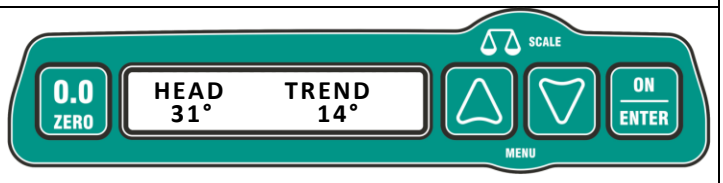


Displayed head angle when measured:

- FROM FLOOR: 45°
- FROM FRAME: 45°

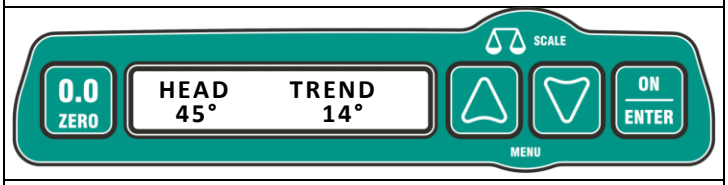


However in a Trendelenburg, reverse Trendelenburg, or Chair position the bed frame is no longer in the horizontal position and the bed frame is now at an angle to the floor. In this case, the head angle that is displayed would differ depending upon which setting was selected.



Displayed head angle when measured FROM FLOOR

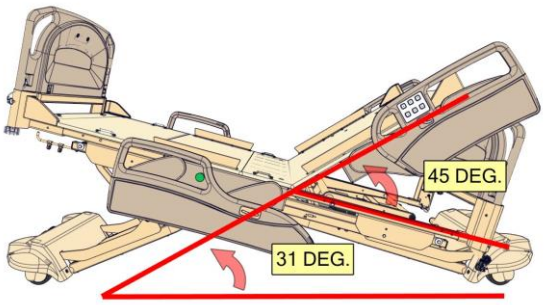
Bed in a 14° Trendelenburg angle used in this example



Displayed head angle when measured FROM FRAME

Displayed head angle when measured:

- FROM FLOOR: 31°
- FROM FRAME: 45°



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To Change Head Angle Origin

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the HEAD ANGLE screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press UP/DOWN arrow buttons to scroll through available selections:
    - FROM FLOOR
    - FROM FRAME
4. Press ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the head angle origin has been changed. Press the 0.0/ZERO button to "escape" to the home screen.

4.8.5 Language Settings

To meet the display languages required in your healthcare facility the enhanced footboard staff control on Spirit Select™ beds has the ability to change the language that is displayed on LCD display.

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the LANGUAGE screen.
2. Press the ON/ENTER button to enter this menu option. The current selection (ENGLISH) will be shown.
3. Press UP/DOWN arrow buttons to scroll through available languages.
4. Press ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the display language has been changed. Press the 0.0/ZERO button to "escape" to the home screen. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance if alternate display languages are required.

4.8.6 Control Box Versions

The Service Menu includes menu options that will display the current software version of the various control boxes on the bed. This information can be useful to service personnel when servicing and/or troubleshooting the bed.

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll through available selections:
    - CB10/CB11 VERSION
    - CB09 VERSION
    - HEAD ANGLE VERSION
2. Press the ON/ENTER button to make desired selection. The current software version on that component will be displayed.

4.8.7 Configuration List/Code

The Service Menu includes menu options allow service personnel to scroll through a list of options and features included on the bed. This information can be useful to service personnel when servicing and/or troubleshooting the bed.

4.9 Maintenance Menu

A Maintenance Menu is available on Spirit Select™ beds. The Maintenance Menu includes menu options that are generally accessed when conducting scheduled maintenance. Also, the Maintenance Menu includes menu options that allow for the bed to be configured to work with the existing Nurse Call system in your healthcare facility. Addtionally, in the rare event of component failure and/or malfunction, some of the bed's critical items can be disabled in the Maintenance Menu to restore partial bed functionality until the bed can be properly serviced.

IMPORTANT: To prevent unauthorized changes to bed settings, the Maintenance Menu can only be accessed after the access code has been successfully entered.

4.9.1 Inputting Access Code

An access code is required before staff is permitted to access the Maintenance Menu.

Entering the Access Code

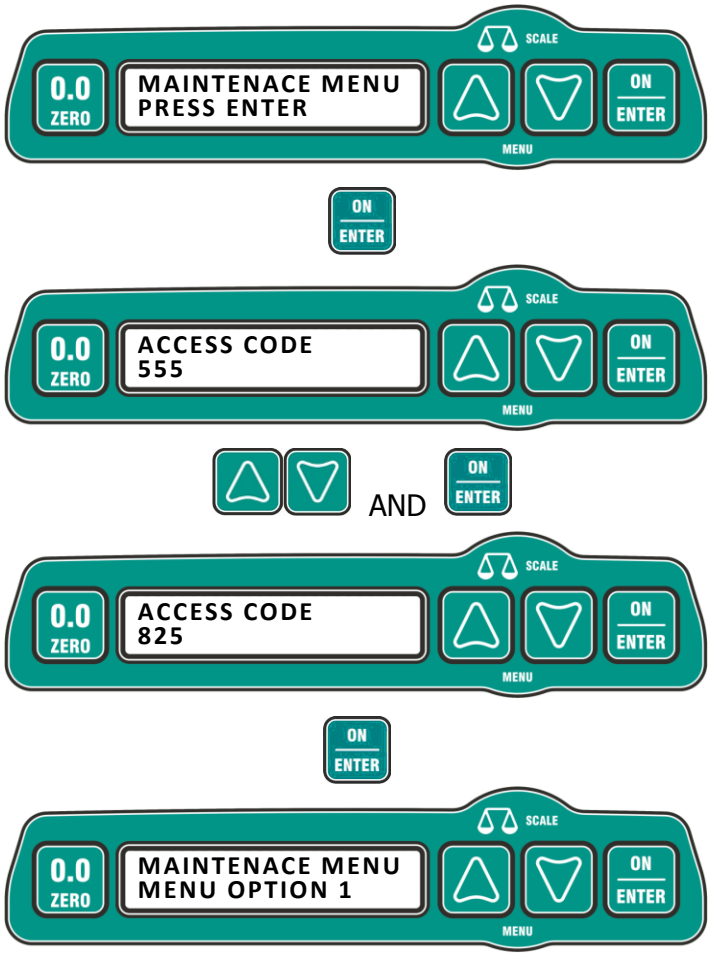
CHG Hospital Beds Access Code: 825

To enter the access code:

1. Use the UP/DOWN Arrow buttons to scroll to each respective number of the access code.
2. Press the ON/ENTER button to input each number of the access code. The cursor will automatically shift to the next number when the ON/ENTER button is pressed.
3. When 825 has been inputted, press the ON/ENTER button to enter the access code.

The Maintenance Menu is now unlocked. The first menu option in the Maintenance Menu will now be displayed.

The access code is not customizable



IMPORTANT: If an incorrect Access Code is entered, a warning message will be displayed and the LCD display will automatically return to the "ACCESS CODE" screen to allow for another attempt.

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4.9.2 Disabling Manual CPR Release Items

In the rare event that the manual CPR release system requires service/repair, some manual CPR release related items can be disabled in the Maintenance Menu to restore partial bed functionality to facilitate servicing of the bed.

IMPORTANT: Disabling manual CPR release items may impair the safe operation of the bed. **NEVER** allow a patient to be placed in a bed if these manual CPR release items have been disabled.

⚠ WARNING

NEVER allow a patient to be placed in a bed if these manual CPR release items have been disabled if these items have been disabled. Disabling these items may result in unsafe bed operation. These items should only be disabled in the rare event that the manual CPR release system required service/repair.

4.9.3 Advanced Configurations

The Nurse Call and other audio and TV. control functions can be configured to work with the existing Nurse Call and entertainment systems at your healthcare facility.

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the ADVANCED CONFIGURATION screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through the items that can be configured.
    - CORD OUT INTERLOCK
    - AUDIO TRANSFER INTERLOCK
    - NURSE CALL INTERLOCK
    - TV DATA POLARITY
    - NORMALLY CLOSED NURSE CALL
4. Press ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the respective configurations have been changed. Press the 0.0/ZERO button to "escape" to the home screen. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

4.9.4 Diagnostic Menu

In the event that your Spirit Select™ bed requires service, you may be asked to access this menu option by CHG Hospital Beds' Customer Service to aid in troubleshooting efforts.

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the DIAGNOSTIC MENU screen.
2. Press the ON/ENTER button to enter this menu option.
3. Follow instruction from CHG Hospital Beds' Customer Service representative.

4.10 Calibration

The scale or bed angle must be calibrated if any/all of the load cells or head deck (back rest) inclinometer (head angle sensor) has been replaced. The scale calibration procedure must be completed before the the bed can be fully operational. Additionally, until the scale has been calibrated, the scale, and/or any feature that uses the scale will not be available.

IMPORTANT: To ensure optimal scale performance CHG Hospital Beds strongly recommends calibrating the bed angle if the head deck (back rest) inclinometer (head angle sensor) or major bed component (i.e., Hi-Lo actuator, Hi-Lo spring, leg assemblies, frame component, caster assembly, etc.) has been replaced.

In most instances, calibration must be initiated by staff. However, if the CB10 control box has been replaced, the scale calibration process will automatically be prompted when the bed is first powered up. The LCD display will show the following message.

NOTE: A scale or bed angle calibration attempt may be abandoned at any time. Simply press the 0.0/ZERO button at any time to "escape" to the home screen The scale and bed angle calibration will, respectively, revert to their previous, successfully completed calibration settings to enable bed functionality.

4.10.1 Angle Calibration

Bed angle calibration is the first step in the scale calibration procedure. If the scale has just been calibrated or is about to be calibrated, there is no particular reason to calibrate the bed angle as a separate step.

Before begin the scale calibration procedure, it is recommended that the bed be cleared of all equipment (mattress, lines, etc). Ideally, the mattress deck should be bare.

Angle Calibration Procedure

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the CALIBRATE ANGLE screen.
2. Press the ON/ENTER button to enter this menu option.
3. Press HEAD DOWN button to flatten the head section (back rest) of the mattress deck.
4. Press the ON/ENTER button once the head section (back rest) of the mattress deck has been flattened

An audible chirp will sound to indicate that head deck (back rest) angle has been calibrated.

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5. Press KNEE DOWN button to flatten the knee section of the mattress deck.

6. Press the ON/ENTER button once the knee section of the mattress deck has been flattened

An audible chirp will sound to indicate that knee deck angle has been calibrated.

7. **Press-and-hold** the BED DOWN button to lower the bed. The bed automatically stops when it has reached its fully lowered position.

8. Press the ON/ENTER button once the bed has automatically stop when the bed has reached its fully lowered position.

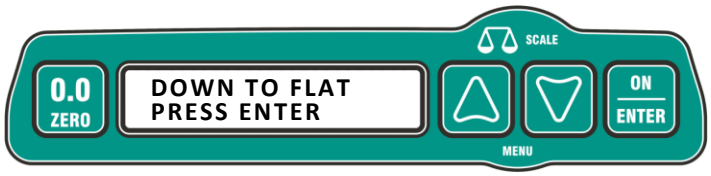
The LCD display will display the following messages to indicate that the actuators have been synchronized.

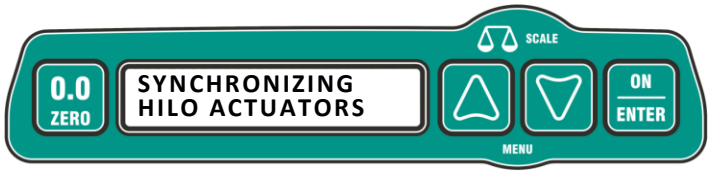
An audible chirp will sound to indicate that bed angle has been successfully calibrated.

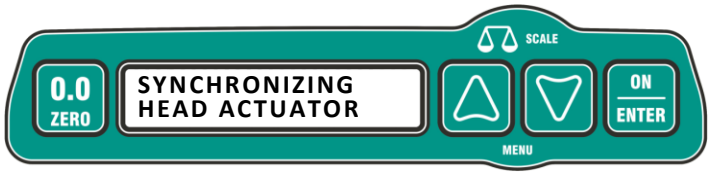
- Press the 0.0/ZERO button to "escape" to the home screen if only the angles required calibration.

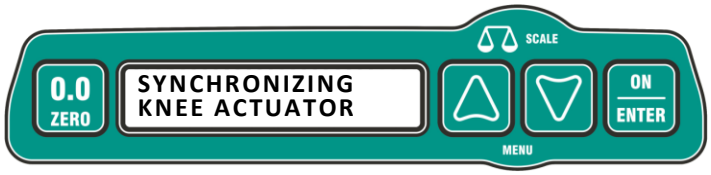
OR

- Continue with the rest of the scale calibration procedure as instructed in the following section.









IMPORTANT: Because of manufacturing tolerances, the mass of the bed alone may be insufficient to completely compress the Hi-Lo springs. To ensure that the bed is sitting completely flat (the mattress deck is perfectly parallel with floor) when in the lowest position, CHG Hospital Beds recommends that the bed angle is calibrated with at least 60kg (132.2 lbs) on the bed.

Hint: *Perform bed angle calibration with a patient or another staff personnel lying on the bed.*

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4.10.2 Scale Calibration

The first step of the scale calibration procedure is to perform the bed angle calibration. Refer to previous step for instructions. After the successful completion of the bed angle calibration, return to this page to continue with the scale calibration procedure.

Preparing the Bed for Scale Calibration

Immediately following the successful completion of the bed angle calibration, you will be instructed to raise the bed to a comfortable working height.

1. Press the BED UP button to elevate bed to comfortable working height.
2. Press the ON/ENTER button when comfortable working height is reached.

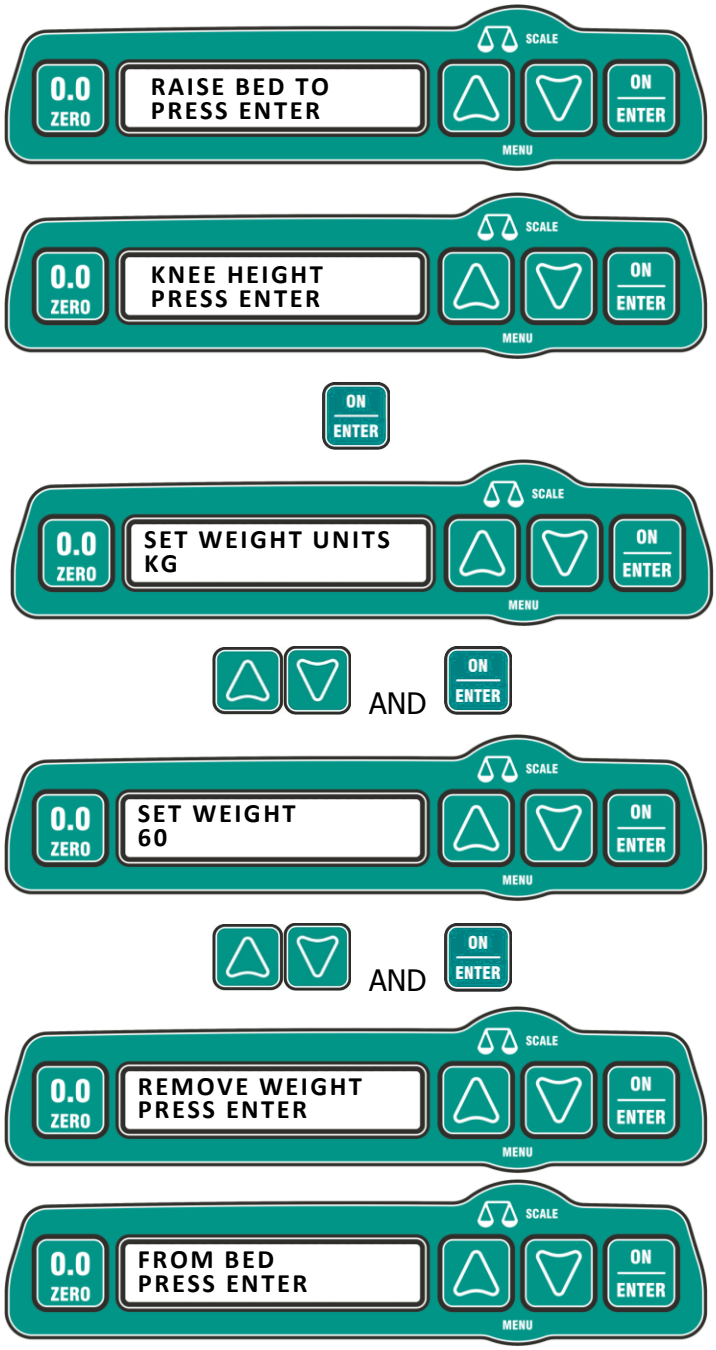
60 KG used in this example

You will now be instructed to set calibration units and weight amount. The weight is the total sum of the certified calibration masses used to the calibration procedure.

3. Press the ON/ENTER button to begin.
4. Press UP/DOWN arrow buttons to scroll to the desired calibration units.
5. Press the ON/ENTER button to make selection.
6. Press UP/DOWN arrow buttons to scroll to the desired calibration weight. Each time the UP/DOWN Arrow buttons are pressed, an increase/decrease of 1 LB or 1 KG (depending upon which unit was just selected) will register.
7. Press the ON/ENTER button to make selection.

You will now be instructed to set calibration units and weight amount. The weight is the total sum of the certified calibration masses used to the calibration procedure.

8. Press the ON/ENTER button when you are ready to begin the scale calibration procedure.



NOTE: Correctly setting the calibration weight and then using that exact total sum of calibration mass is essential to ensure the accuracy of the scale. CHG Hospital Beds recommends the use of certified calibration weights when performing scale calibration. If your healthcare facility does not have certified test masses, enlist the service of an accredited calibration laboratory/service to perform scale calibration. Ensure that the calibration laboratory/service has been accredited by Measurement Canada (or equivalent "weights and measures" certifying body/agency).

NOTE: A scale is most accurate and delivers superior repeatability when it has been calibrated within the range that the scale is expected to typically operate. For this reason, CHG Hospital Beds recommends that minimum weight is 60kg (132.3 lbs) is used to calibrate the scale.

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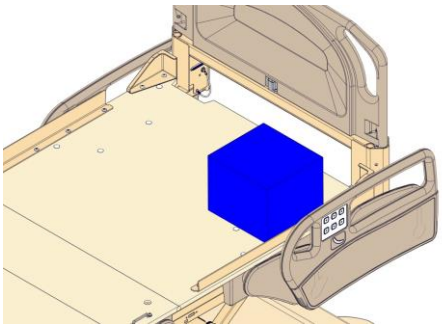
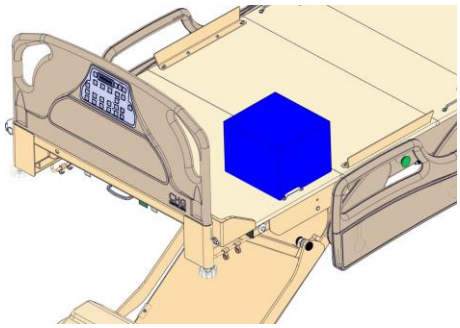
Scale Calibration Procedure

IMPORTANT: Position the calibration masses as shown below. These positions will locate the calibration masses directly over each respective load cell. This will produce the best calibration results.



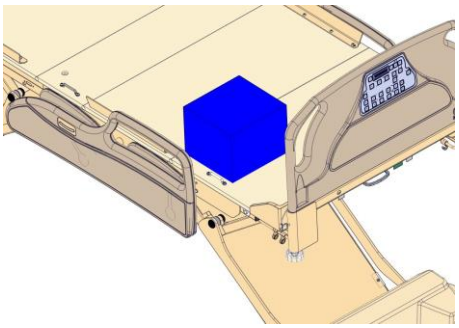
LH = Patient Left, Head end of Bed.

1. Place calibration masses at the patient left, head end of the bed. Press ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.



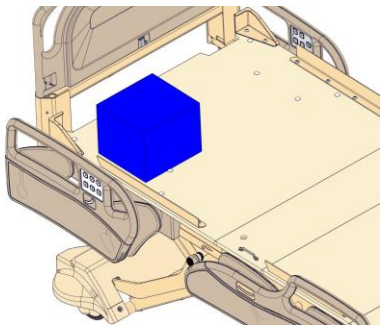
LF = Patient Left, Foot end of Bed.

2. Place calibration masses at the patient left, foot end of the bed. Press ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.



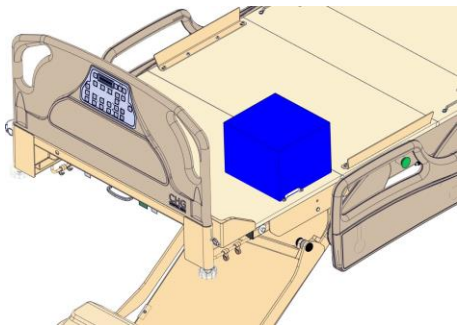
RF = Patient Right, Foot end of Bed.

3. Place calibration masses at the patient right, foot end of the bed. Press ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.



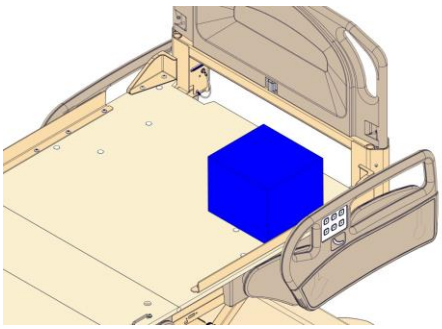
RH = Patient Right, Head end of Bed.

4. Place calibration masses at the patient right, head end of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.



LF = Patient Left, Foot end of Bed.

5. Place calibration masses at the patient left, foot end of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.



LH = Patient Left, Head end of Bed.

6. Place calibration masses at the patient left, head end of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.

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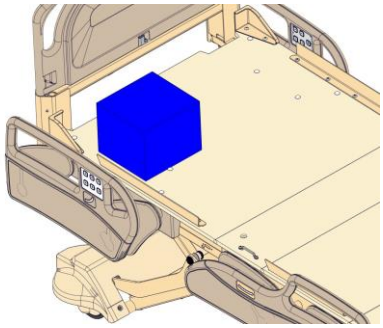
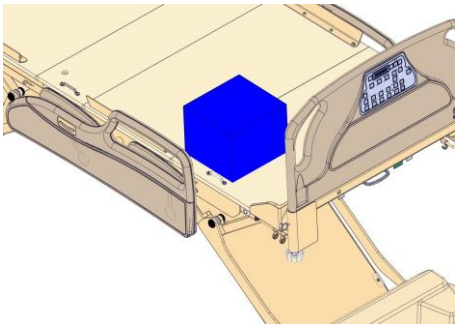


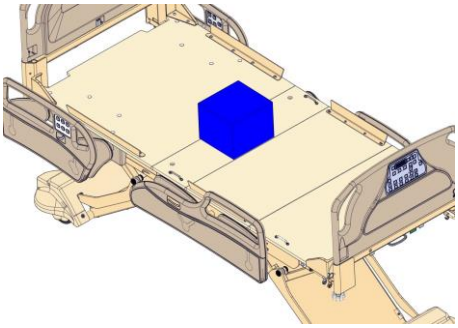
RH = Patient Right, Head end of Bed.

7. Place calibration masses at the patient right, head end of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.



RF = Patient Right, Foot end of Bed.

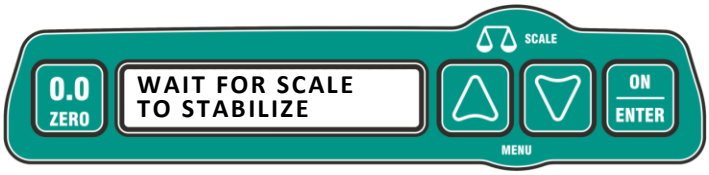
8. Place calibration masses at the patient right, foot end of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.



CEN = Centre of Bed.

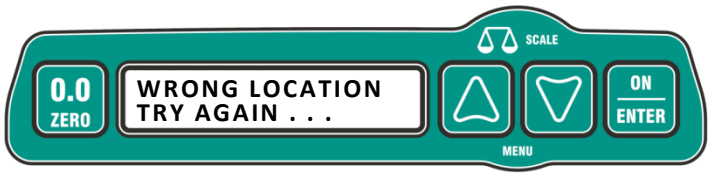
9. Place calibration masses at the centre of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.

IMPORTANT: If the bed detects movement during any stage of the scale calibration procedure, a warning message will be displayed and that particular step will have to be repeated.

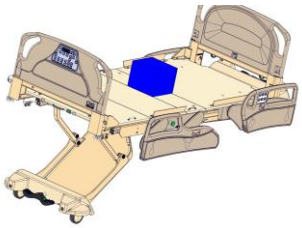


The load cell locations are assigned in the CB10 control box during the first 4 steps of the calibration procedure. Once assigned, each load cell will then "remember" where it's assigned location.

IMPORTANT: If the bed detects that the calibration masses are located in an incorrect location during steps 5-9, a warning message will be displayed. Relocate the calibration masses to the correct location and press the ENTER button to continue with scale calibration.



10. Leaving the calibration masses in the bed centre, place the bed in the maximum Trendelenburg position. **PRESS and HOLD** the TREND button. Press ON/ENTER button once the bed automatically stops in the maximum Trendelenburg position. A confirmation "chirp" will sound to indicate that this step was successful.



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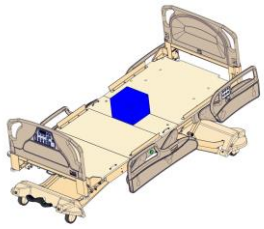
11. Leaving the calibration masses in the bed centre, place the bed in the maximum reverse Trendelenburg position. **PRESS and HOLD** the rev.TREND button. Press ON/ENTER button once the bed automatically stops in the maximum reverse Trendelenburg position. A confirmation "chirp" will sound to indicate that this step was successful.



12. Leaving the calibration masses in the bed centre, place the bed in the maximum reverse Trendelenburg position. **PRESS and HOLD** the rev.TREND button. Press ON/ENTER button once the bed automatically stops in the maximum reverse Trendelenburg position. A confirmation "chirp" will sound to indicate that this step was successful.

13. After successful completion of the calibration procedure, a message will be displayed. Press ON/ENTER button to continue.
    - Press the LEVEL ALL button to level bed. The bed will stop automatically when the mattress deck is level with the floor.
    - The scale has now been successfully calibrated and the bed is now ready for use.

If the bed detects a problem during any stage of the scale calibration procedure, a warning message will be displayed.

- Press the ON/ENTER button to acknowledge calibration procedure failure.
- The LCD display will automatically return you to the home screen.

IMPORTANT: If the calibration procedure fails a second time, the bed may require service and/or component replacement.

⚠ WARNING

The Spirit™ bed may shift during Trendelenburg or reverse Trendelenburg activation.

Initiate Trendelenburg or reverse Trendelenburg only after the Central "Lock & Steer" system has been put in the "BRAKE" position.

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4.11 Exit All Menus

When selected, this menu will return the user to the home screen.

From within the menu list:

1. Press the UP/DOWN arrow buttons to scroll to the EXIT ALL MENUS menu option
2. Press the ON/ENTER button to return to the home screen.

From within any menu:

3. Press the UP/DOWN arrow buttons to scroll to the EXIT within any menu
4. Press the UP/DOWN arrow buttons to scroll to the EXIT ALL MENUS menu
5. Press the ON/ENTER button to return to the home screen.

Escape Function	Press the 0.0/ZERO button to return back to or "escape" to the home screen. This function can be performed at any time in any menu option screen.	

Section 5:

Care & Maintenance

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5.1 Regular Maintenance & Cleaning

Very little maintenance is required to keep the Spirit™ bed in good working order.

CHG Hospital Beds recommends that bed inspections be conducted as per 5.1.2, 5.1.3 and 5.1.4 of this section, or more frequently if so specified by the facility procedures and practices.

All metal components are power coat painted and therefore are protected from corrosion. In the event that the paint become scratched or chipped, use a matching enamel touch up paint. Refer to page 122 for paint specifications.

⚠ CAUTION

Equipment or property **DAMAGE** or patient **INJURY** may occur if the following are not followed:

DO NOT submerge the bed frame or electrical parts. **DO NOT** allow liquids to enter electrical components. If a liquid is spilled in or around the bed, unplug the bed before cleaning. Clean up the spill and allow the bed and/or the area around the bed to dry thoroughly before using the controls again.

DO NOT open assemblies such as actuators, control boxes, battery, or pendant (if equipped). These parts are not serviceable. Only service technicians, specifically trained to service Spirit™ beds, should attempt to service bed and/or replace electrical or other components.

Before the bed is returned to active service after any adjustment, repair, and/or service have been performed, **ALWAYS** ensure that all attaching hardware is tightened securely.

5.1.1 Cleaning & Disinfection

CHG Hospital Beds recommends that all cleaning/disinfection be performed by hand using a non-abrasive cloth, sponge, and/or manual spray/squirt bottle. **ALWAYS** follow industry best practices for all cleaning and/or disinfection operations. **ALWAYS** reference the manufacturers' MSDS information for all cleaning/disinfection solutions prior to use.

IMPORTANT: The Spirit™ bed is not rated for spray and/or pressure washing or steam cleaning/sterilization. Using non-recommended cleaning/disinfecting solutions, and/or not following recommended handling directions and/or industry best practices may cause damage to the bed's painted finish, bed components, and/or may result in premature mattress failure.

Cleaning

All Spirit™ bed surfaces and the CHG Prevention Surface mattress cover may be cleaned with soapy water and/or other non-abrasive cleaners. **NEVER** use solvents, petroleum products, and/or other harsh chemicals to perform any cleaning operation.

Disinfection

All Spirit™ bed surfaces and the CHG Prevention Surface mattress cover may be disinfected with ethanol or isopropyl alcohol, and/or Mikro Quat™ (or equivalent cleaning solution). Sodium Hypochlorite (liquid bleach) may also be used to disinfect the Spirit™ bed and the CHG Prevention Surface mattress cover.

Maximum Recommended Sodium Hypochlorite Concentration: 0.5% or 5,000 ppm

To disinfect the Spirit™ bed, saturate an application cloth with disinfecting solution and wipe surface(s). Using another cloth saturated with potable (tap) water, rinse disinfected surface(s) and wipe dry. **DO NOT** allow the disinfecting solution to pool and/or reside on surface(s) for extended periods of time. Exceeding the maximum recommended concentration and/or using non-recommended disinfecting solutions may cause damage to the bed's painted finish, bed components, and/or may result in premature mattress failure.

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5.1.2 Semi Annual Inspections

Control Location Inspection
Perform all bed functions from all control locations: footboard staff control, patient/staff siderail controls, and pendant (if equipped).

Battery Inspection
Confirm the following: • Bed is plugged into an AC power outlet. • Battery is connected to the CB10/CB11 control box. • The power status indicator has **ONLY** a solid Green AC light. If other light are on/flashing, refer to pages 53 and 54 for instructions and take appropriate action before continuing with inspection. Unplug the bed from the AC power outlet and perform all bed functions, including emergency functions, to test bed operation under battery power. This will verify that the battery is holding a proper charge sufficient to deliver emergency functions when needed. Replace battery if performance is inadequate.

If your Spirit™ bed is equipped with the under bed obstruction sensing option, perform an inspection of all six obstruction sensor pads to ensure that they are in good working order and continue to operate properly.
Obstruction Sensor Inspection
Ensure that contact at any point on each of the six obstruction sensor pads stops all downward bed motion.
Ensure that the bed automatically elevates the 1" safety distance.
For Spirit Plus™ beds, ensure audible warnings are present as described on page 62.
For Spirit Select™ beds, ensure audible and visual warnings are present as described on page 62
Replace any obstruction sensor pad that fails to operate correctly or consistently.

5.1.3 Yearly Inspections & Maintenance

Inspect the bed for broken, bent, or damaged components and replace. Check for damaged components that may present a hazard due to sharp edges.
Inspect for damaged or loose wiring. Have qualified service personnel, specifically trained to service Spirit™ beds, replace any frayed or damaged cords and/or secure any loose wiring.
Inspect the control boxes and actuators to ensure that the enclosures are not cracked or damaged.
Inspect the footboard staff control, side rail controls, and pendant to ensure that the overlays covering these controls are not cracked or damaged.
Inspect all grounding wires and equipotential conductor. Ensure they are securely fastened to the bed frame.
Tighten, adjust and/or replace any parts or screws, bolts, clevis/hitch/cotter pins, etc. that are loose or show signs of wear.

Using white petroleum jelly, lubricate between the Hi-Lo springs and the spring bushing. Fully elevate the bed and refer to page 108 to gain access the Hi-Lo springs. Apply white petroleum jelly to rail bracket slots, ensuring the shoulder bolt receives lubrication as well. Apply paraffin wax to linear guide block shafts.

Spray metal shoulder bolts, washers, bushings and nuts using a high quality penetrating white lithium grease spray on all control arm and suspension arm joints

Perform inspection of side rails to ensure that they are in good working order and continue to operate properly.

Regular Height or High Side Rail Inspection

Ensure that each side rail fully and smoothly rotates from the DOWN position to the UP position. Ensure that no binding and/or grinding noises are caused when the side rails are rotated. If a side rail fails to rotate fully and smoothly, service and/or replace side rail assembly.

Ensure that the locking/latching mechanism reliably self-engages when the side rails are fully rotated to the raised/closed position. If locking/latching mechanism fails to reliably self-engage service and/or replace side rail assembly.

Ensure that the locking/latching mechanism completely disengages when the PRESS button is depressed permitting the side rails to fully rotate to the lowered/open position. If locking/latching mechanism fails to completely disengage service and/or replace side rail assembly.

If your bed is equipped with the optional Electronic Foot Side Rail Release feature, in addition to the above, ensure that the electronically actuated unlocking/unlatching mechanism completely disengages, when the **"FOOT RAIL/PRESS 3X"** button is pressed 3 times. If electronically actuated locking/latching mechanism fails to completely disengage service and/or replace side rail assembly.

IMPORTANT: Special service instructions are required to service/replace these foot side rail assemblies. Contact CHG Hospital Beds' Customer Service for further details and special service instructions prior to performing any/all service activities on these foot side rail assemblies. Component damage may occur if service is attempted without special service instructions.

⚠ WARNING

Patient entrapment within, under, between, and beside side rails may cause injury or death. Ensure only specified mattress (minimum 6" thick) is used on bed. Ensure that mattress is in good condition and maintains proper resilience. If mattress is exhibiting any signs of wear (i.e.: reduced cross sectional thickness, reduced resilience, etc.) stop use immediately and replace mattress to limit patient exposure to a potential rail entrapment situation.

⚠ WARNING

To help minimize the potential for patient entrapment, CHG Hospital Beds recommends that the customer perform thorough inspection of all side rail assemblies to confirm continued compliance to IEC 60601-2-52 by conducting annual examinations of each side rail assembly to test described in IEC 60601-2-52, Amendment 1, Clause 201.9.1.101. If testing results indicate a potential risk of patient rail entrapment, discontinue patient bed use and remove the bed from active service immediately.

5.1.4 Specific Maintenance Requirements for Spirit Select™ Beds

Perform annual calibration of the scale on Spirit Select™ beds or immediately following the replacement of one or more load cells and/or the CB10/CB11 control box. Refer to page 94 for scale calibration instructions.

NOTE:	To ensure scale accuracy, use only ASTM, OIML, NIST (or equivalent) certified test masses when performing scale calibration. If your healthcare facility does not have certified test masses, enlist the service of an accredited calibration laboratory/service to perform scale calibration. Ensure that the calibration laboratory/service has been accredited by Measurement Canada (or equivalent "weights and measures" certifying body/agency).

NOTE:	Calibrating the bed angle is the first step of scale calibration. If the scale has just been calibrated or is about to be calibrated, there is no particular reason to calibrate the bed angle as a separate step.

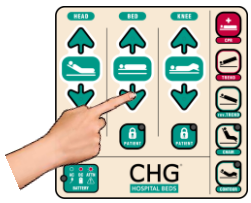
5.2 Controls Servicing

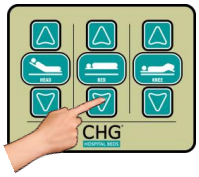
5.2.1 Soft Reset of Controls

If in the rare event that the two Hi-Lo actuators become out-of-sync with one another, the bed may not completely lower or the mattress deck on the bed may appear to be in a slight angle similar to when it has been put into a Trendelenburg or reverse Trendelenburg position. The bed may also cease to perform all elevation/descent bed motion. In this case, the bed may require a "soft reset" to re-establish proper Hi-Lo actuator synchronization and/or restore proper bed operation.

Soft Reset Procedure

1. **PRESS and HOLD** the BED DOWN button from any control location (footboards staff control, either staff siderail controls or pendant) until the bed automatically begin to lower. One end of the bed may completely lower before the other. ***This is perfectly normal.***
2. **CONTINUE to HOLD** the BED DOWN button until both ends of the bed have been completely lowered and the bed automatically stops all motion and the two tone audible indicator sounds. Continue to Hold bed down for an additional 20 seconds to complete the Soft Reset. The Hi-Lo actuators have now been re-synchronized.





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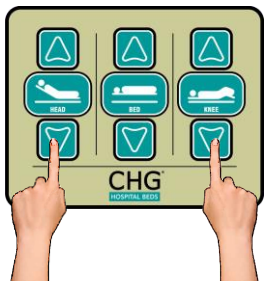
5.2.2 Hard Reset of Controls

If the CB10/CB11 control box firmware has been updated or, in the rare event communication is lost between the footboard staff controls and the CB10/CB11 control box, the controls may require a "hard reset" to re-establish proper component-to-component communication and/or restore proper bed operation.

IMPORTANT: This event does not occur by simply removing the footboard from the bed as would be routinely performed during normal use of the bed.

Hard Reset Procedure

1. Disengage the foot and knee deck sections of the mattress deck to gain access to the CB10/CB11 control box. Refer to page 120 for instructions.
2. Disconnect (unplug) the bed from the AC power outlet.
3. Disconnect battery cable from the side of the CB10/CB11 control box. This will disrupt power to the CB10/CB11 control box and the close the battery charging circuit relay. Wait 5 seconds to ensure that the CB10/CB11 circuit board is de-energized. Reconnect battery cable into the side of the CB10 control box.
4. **PRESS and HOLD** the HEAD DOWN and KNEE DOWN buttons from either of the staff siderail controls while you reconnect (plug in) the bed to an AC power outlet. A confirmation "chirp" will sound to indicate the successful completion of the "hard reset" procedure.
5. Re-engage the deck sections by aligning the hinge fingers and pressing the two deck sections together. Refer to page 120 for instructions.



IMPORTANT: The Spirit Select™ scale must be zeroed after every "hard reset".

HINT: *It may be helpful to have another person plug in the power supply cord while you* ***PRESS and HOLD*** *the HEAD DOWN and KNEE DOWN buttons.*

NOTE: The scale does not require re-calibration after a "soft reset" or a "hard reset".

5.2.3 Updating Firmware on the CB10 Control Box

The firmware on Spirit™ beds equipped with the CB10 control box can be updated using a "miniSD" card. Each CB10 control box is equipped with a miniSD card slot to facilitate the firmware update procedure.

Accessing the Card Slot in the CB10 Control Box

To access the miniSD card slot:

1. Raise the bed to its maximum height.
2. The miniSD card slot is now easily accessible. It is located in the lower patient right side of the CB10 control box at the foot end of the bed.

HINT: *It may be easier to access the miniSD card slot while kneeling at the foot end of the elevated bed looking towards the head end of the bed under the mattress deck rather than attempting to access it from above with the deck sections removed.*

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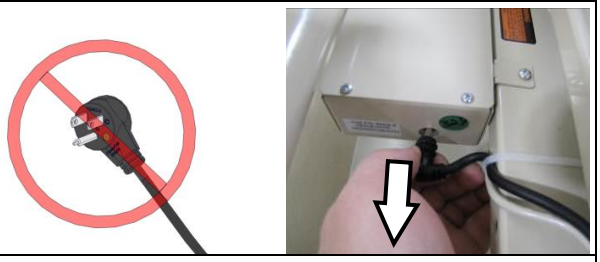
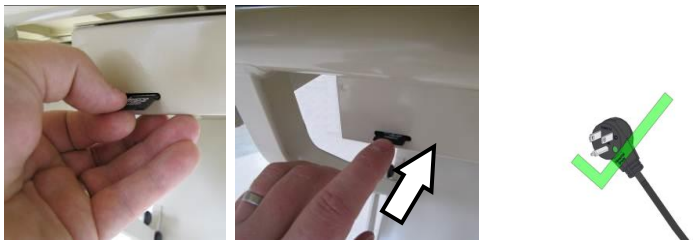
Firmware Update Procedure

1. Disconnect (unplug) the bed from the AC power outlet.
2. Disconnect battery cable from the CB10 control box.



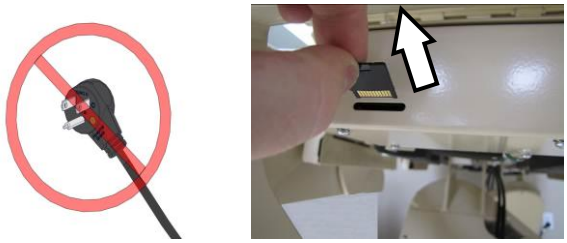
3. Gently insert miniSD card into the card slot in CB10 control box until it is fully seated.
4. Reconnect (plug in) the bed to the AC power outlet.
5. The firmware update process will start automatically. Once complete, the CB10 control box will then automatically reboot.



IMPORTANT: DO NOT interrupt the firmware update process. Premature removal of the SD card could result in an incomplete firmware flash. This may render the CB10 control box inoperable!

Once the LCD display returns to the home screen, the firmware has been successfully updated and you may now remove the miniSD card from the CB10 control box.

6. Disconnect (unplug) the bed from the AC power outlet.
7. Remove miniSD card from the CB10 control box.



8. Perform a "hard reset" of the controls. Refer to page 117 for instructions.

The bed with the updated firmware is now ready for use.

5.2.4 Updating Firmware on the CB11 Control Box

The firmware on Spirit Select™ beds equipped with the CB11 control box can be updated using a USB "stick". Each CB11 control box is equipped with a USB drive slot to facilitate the firmware update procedure.

Accessing the USB drive slot in the CB11 Control Box

To access the USB drive slot:

1. Raise the bed to its maximum height.
2. The USB drive slot is now easily accessible. It is located in the lower patient right side of the CB11 control box at the foot end of the bed.

HINT: *It may be easier to access the USB drive slot while kneeling at the foot end of the elevated bed looking towards the head end of the bed under the mattress deck rather than attempting to access it from above with the deck sections removed.*

Firmware Update Procedure

3. Gently insert USB stick into the USB drive slot in CB11 control box until it is fully seated.
4. The firmware update process will start automatically.
5. Follow the prompts on the LCD display to complete the firmware update process.

6. Perform a "hard reset" of the controls. Refer to page 117 for instructions.

The bed with the updated firmware is now ready for use.

5.2.5 Obtaining Updated Firmware

To obtain the latest version of firmware contact CHG Hospital Beds' Customer Service.

For the CB10 control box, miniSD cards, preloaded with appropriate firmware, is available. In some cases, CHG Hospital Beds may provide an updated version of firmware via email. This can then be loaded onto an existing miniSD card (non-HC format) by first inserting it into any commercially available miniSD to SD card adapter (see right) and then inserting the adapter into a standard SD card reader or SD card slot on a computer.

For the CB11 control box, CHG Hospital Beds can provide an updated version of firmware via email. This can then be loaded onto any typical commercially available USB stick (see right).

Contact CHG Hospital Beds' Customer Service for further details.

Example of miniSD card and SD card adapter used for CB10 firmware updates

Example of USB stick used for CB11 firmware updates

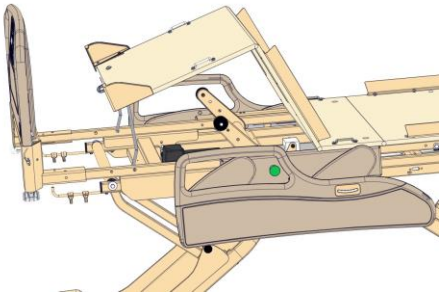
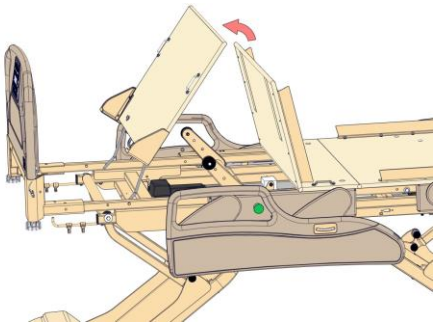
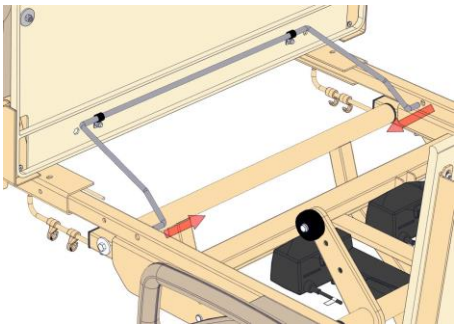
IMPORTANT: Only beds with firmware version of 2.10 or newer (numerically higher) can be updated using the miniSD card. If the firmware update procedure failed to automatically initiate, contact CHG Hospital Beds' Customer Service for alternate firmware update options.

NOTE: CHG Hospital Beds maintains a history file for every Spirit™ bed. After the firmware has been successfully updated, contact CHG Hospital Beds' Customer Service at (519) 963-4010 or Toll Free 1 (866) 516-5446 with the date of the firmware update, the bed serial number, and the firmware version number to ensure that the bed's history file is appropriately updated.

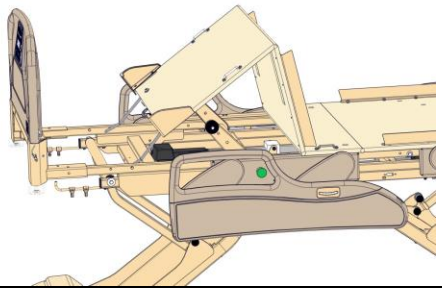
5.3 Mattress Deck Removal

All four sections of the composite mattress deck can be detached for thorough cleaning, sanitization, and maintenance.

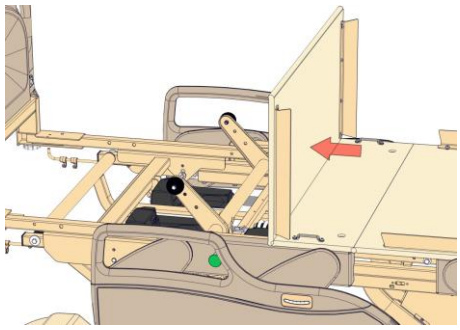
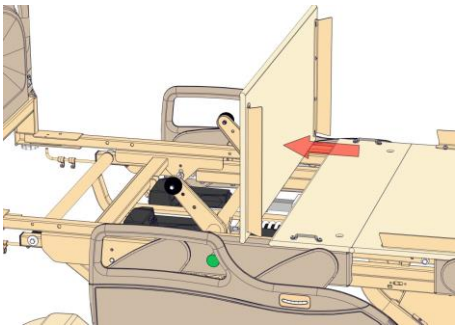
5.3.1 Mattress Deck Removal - Foot Section

		
1. Lift the foot and knee sections together until the angle between them is greater than 90º.	2. Lift the foot section away from the knee section at the hinge, to separate the sections.	3. Disengage the foot bail from the frame by flexing the two ends together as shown.

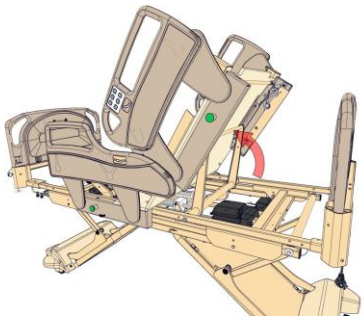
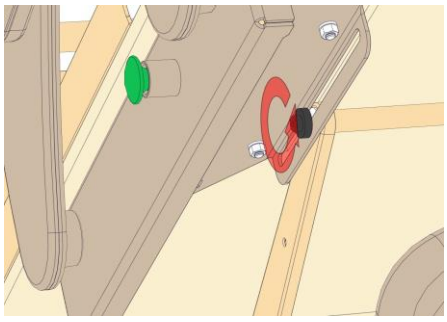
5.3.2 Accessing the CB10/CB11 Control Box

NOTE: If you are considering removing deck sections in attempts to gain access to the CB10/CB11 control box, no deck sections need to be removed from the bed. From step 1 above, simply continue to rotate the foot section up until it comes to rest against as shown right. The CB10/CB11 control box is now accessible.	

5.3.3 Mattress Deck Removal - Knee Section

Once the foot section is removed, the knee section can be separated from the stationary (bolted) seat section. Lift the knee section until it is at an angle of 90° to the seat section. Using a horizontal force, strike the knee section near the hinge to separate these two sections.		

5.3.4 Mattress Deck Removal - Head Section (Back Rest)

Elevate the head section (back rest) to an angle of 55°. Using a 3/16” Allen key, remove both shoulder bolts fastening the head deck (back rest) to the head gatch. Locate both head siderail control cables. Follow cables down to where they are retained on the frame. Using wire cutters, cut both zip ties.		

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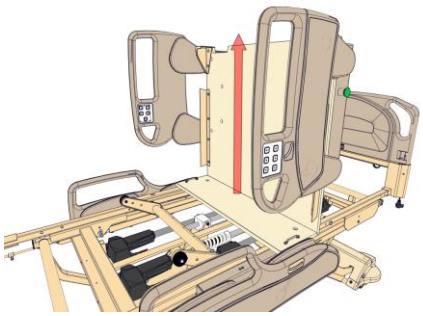
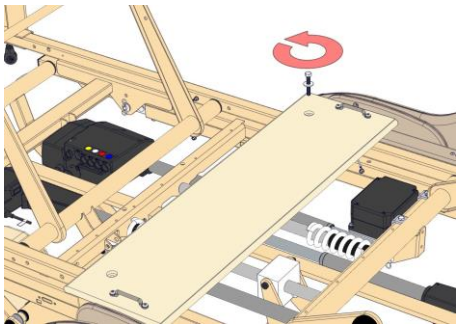
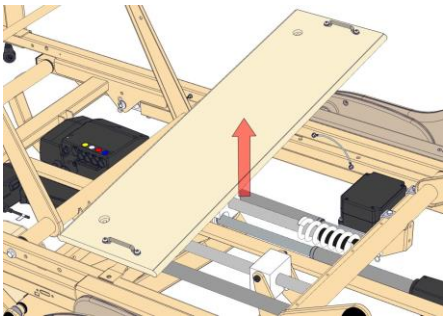
Using a small, slot screw driver, depress the retaining clip on both head siderail control cables and disconnect both cables. The head section (back rest) can now be lifted straight up, detaching it from the stationary (bolted) seat section.		

5.3.5 Mattress Deck Removal - Seat Section

The seat section is attached to the bed frame with two bolts fasteners. Although it is not designed for routine removal, it can be removed, if necessary.

Using a ratchet with a 1/2" SAE socket loosen and remove the two bolts fastening the seat section to the bed frame. The seat section can now be lifted off the frame. **IMPORTANT:** The head section (back rest) must first be removed before the seat section can be removed from the bed.		

NOTE:	Re-engage the deck sections by aligning the hinge fingers and pressing the two deck sections together. When reinstalling any section of the mattress deck, ensure that all hinges are **COMPLETELY** engaged before attempting to articulate the connection. Check for proper engagement by gently articulating the head, knee, and foot sections of the mattress deck up and down. The head, knee, and foot sections of mattress deck should articulate freely without binding.

5.4 Before Calling The Factory

To ensure prompt and accurate attention to your concerns please have the following information available before you call:

Spirit™ Bed Service Call Information	
Your facility's **phone number**: *(Where you can be reached):*	
Your facility's **fax number** *(If Available)*:	
Bed(s) **Model and Type**:	
Bed(s) **Serial Number**	
Date of Purchase:	
List of **defective part(s)** (*Identify by part number, or describe relative to nearest numbered part)*:	
List of deficiencies or **Type of problem**:	

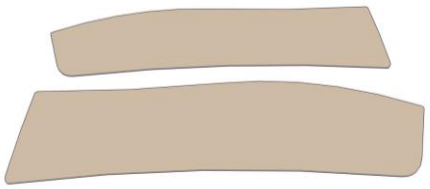
NOTE:	CHG Hospital Beds' determination of the "Patient Left" and the "Patient Right" side of the bed is made from the patient's point of view while positioned normally on the bed facing up.

If you have carefully followed all of this instructions contained in this manual, you should expect many years of trouble free service. If you're not 100% satisfied with your bed, please call your sales representative or the factory immediately.
It's always better to ask if you have any questions such as hole drilling locations in head and footboards, or before performing electrical service and/or modifications, or continuing to use a bed that has been damaged and/or is exhibiting signs of minor damage. These activities could lead to more serious consequences such as potential injury to patient and staff and/or equipment damage.
If you require further information regarding circuit diagrams, component part lists, descriptions etc. please contact CHG Hospital Beds' Customer Service.

Call CHG Hospital Beds Inc. at (519) 963-4010 or Toll Free 1 (866) 516-5446.

Mailing Address: CHG Hospital Beds Inc.
1020 Adelaide Street South
London, Ontario
Canada
N6E 1R6

5.5 Colour Information

In the rare event that the painted finish on your Spirit™ bed becomes chipped you will require touch up paint. CHG Hospital Beds recommends the use of Sherwin Williams Auto #5A-30041 – Gatsby Cream (formerly #35-30041 – Cream)	
Your Spirit™ bed may come with coloured inlay on the siderail assemblies and/or on the footboard assembly. If these become damaged and require replacement, please contact CHG Hospital Beds' Customer Service to ensure that you receive matching inlays.	

5.6 Troubleshooting Guide

NOTE:	Prior to using the Troubleshooting Guide, perform a brief function test on the bed. Check all functions initiated from both the footboard staff control and the patient control (staff/patient rail control and/or pendant) to determine which functions are not working.

Problem / Failure	Recommended Action
Bed is connected (plugged in) to an AC power outlet but appears to be "frozen" Power status indicators may or may not be illuminated/flashing	Cycle the power on/off to reset the controls and re-establish proper communication between the CB09 and CB10 control boxes. 1. Disconnect battery from CB10 control box 2. Disconnect (unplug) bed from the AC power outlet 3. After the bed has been disconnected from the AC power outlet, fully discharge the CB09 control box by sequentially depressing the UP and DOWN buttons on one of the siderail controls or on the pendant (depending upon how bed is equipped) at least 20 times 4. Reconnect (plug in) the bed to the AC power outlet 5. Test any bed function from any control location to confirm proper bed control has been restored 6. Reconnect battery to CB10 control box 7. Call for CHG Hospital Beds Customer Service for technical assistance
Bed is connected (plugged in) to an AC power outlet but bed is not functioning Power status indicators may or may not be illuminated/flashing	1. Check to ensure bed is connected (plugged in) to an AC power outlet 2. Check AC outlet for power 3. Check Master Lockout. **PRESS and HOLD** all three patient lock-out buttons at same time to lock/unlock, then try bed functions 4. Lift head section of the mattress deck and remove dust shield from on top of CB09 control box. Check for green power light (LED). If no light, check to ensure that the power cord has been fully inserted into the inlet receptacle of the CB09 control box 5. Check to ensure that the communication cable that runs between the CB09 and CB10 control boxes is fully inserted into the port on the CB09 control box 6. Call for CHG Hospital Beds Customer Service for technical assistance
Some bed articulations no longer working or are intermittent regardless of control location Power status indicators may or may not be illuminated/flashing	If the head and/or foot sections of mattress deck no longer elevate/lower **OR** bed will no longer raise/lower **OR** bed motion is intermittent it is necessary to ensure proper connections. 1. Lift head section of the mattress deck and remove dust shield from on top of CB09 control box 2. Check to ensure that every actuator colour coded cable has been fully inserted into port on the CB09 with the corresponding colour code 3. Check to ensure that the power and the communication cable that run between the CB09 and CB10 control boxes are fully inserted into their respective ports on the CB09 control box 4. Lift foot section of the mattress deck and removed the cover from the CB10 control box 5. Check to ensure that every connector is firmly connected to its respective header on the CB10 circuit board 6. Test any bed function from any control location to confirm proper bed control has been restored 7. Call for CHG Hospital Beds Customer Service for technical assistance

Patient controls working properly, footboard staff control not working	3. Check to ensure footboard is completely down into bracket 4. Check cable connection under lower left side of footboard 5. Check to make sure that there is no damage to Blindmate connectors (plastic connector between bottom of footboard and footboard mounting bracket) 6. Check footboard staff control cable connection into CB10 control box under foot section of mattress deck 7. Replace footboard control
Footboard staff control working properly, rail controls not working	1. Some functions may be locked out. Check patient lock-out buttons on footboard. Patient lock-out prevents bed operation from rail controls 2. Check rail controls on both sides of bed. If only one rail control is not working skip to next section. If both rail controls are not working, continue to next step 3. Check cable connections from rail to port on bed frame (ensure jack is fully inserted into port) 4. Check pendant connection into CB10 control box under foot section of mattress deck 5. Replace CB10 Control Box
Siderail control working on one side of the bed only	1. Check cable connection (ensure connector is fully inserted into T-cable port) 2. Unplug rail connection at port and replace with pendant (if available). If pendant works, replace inoperable rail control. If pendant doesn't work, replace T-Cable
Footboard staff control working properly, pendant not working	1. Some functions may be locked out. Check patient lock-out buttons on footboard. Patient lock-out prevents bed operation from the pendant 2. Check cable connection from pendant to port on bed frame 3. Check pendant connection into CB10 control box under foot section of mattress deck 4. Unplug pendant from current port and plug into port on opposite side of bed. If pendant works in new port, replace T-Cable. If pendant does not work in new port, continue to next step 5. Test pendant on a properly functioning bed (if available). If pendant works, replace CB10 control box. If pendant doesn't work, replace pendant
Only some functions working on the rail controls or pendant	1. Some functions may be locked out. Check patient lock-out buttons on footboard. Amber LED on patient lock-out button prevents the bed operation from the rail controls and pendant 2. Check cable connection from rail control to port on bed frame 3. Check pendant connection into CB10 control box under foot section of mattress deck 4. Replace rail control or pendant
Bed will not lower all the way or the bed appears to be a slight Trendelenburg or reverse Trendelenburg angle. **OR** The bed has ceased to perform all elevation/descent motion.	The Hi-Lo actuators are likely out-of-sync. The bed requires a "soft reset" to re-establish proper Hi-Lo actuator synchronization and/or restore proper bed operation. 1. Refer to page 116 for "soft reset" procedure.

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Bed will not run on DC power	1. Check to see if indicator LED on the Power Status Indicator is flashing RED. If flashing, check to see if the battery has been disconnected from the CB10 control box. Connect DC plug into DC jack in the side of the CB10 control box 2. The battery is connected but voltage has dropped below 18VDC and the battery has been automatically disconnected from battery circuit. Ensure bed is connected (plugged in) to an AC power outlet and allow battery to recharge. Confirm indicator LED is flashing GREEN and RED on the Power Status Indicator 3. If the service icon of the Power Status Indicator remains on after lengthy recharge period, replace battery 4. If the service icon of the Power Status Indicator remains on after battery replacement, replace CB10 control box
Bed Equipped With Obstruction Sensing Option Bed does not automatically stop when one or more obstructions sensors is contacted	1. Confirm which obstruction sensor(s) is(are) not working 2. Check to see if interconnection cables (between sensors) are connected or have been twisted. Replace interconnection cables 3. Check to see if interconnection cables (between sensor and CB10 control box) are connected or have been twisted. Replace interconnection cables. 4. Replace faulty obstruction sensor(s)
Bed Equipped With Obstruction Sensing Option Bed will not lower when DOWN button pressed Bed behaves like it is contacting an obstruction when none are obvious	1. Check Bed UP button on footboard staff control. If illuminated, check under bed for any obstruction that is contacting any of the obstruction sensors. Remove obstruction. Confirm Bed UP button is not illuminated 2. If no obstruction is present, carefully inspect each obstruction sensor for signs of damage (gouge, dent, etc.). Damage could cause false switch contact to be made. If no damage is obvious, continue to next step. If damage is obvious, replace damaged obstruction sensor(s) The obstruction sensors are linked in "series" to form an electrical circuit. The circuit series is linked as follows: CB10 control box, interconnection cable, top leg cover sensor, interconnection cable, caster cover sensor, interconnection cable, bottom leg cover sensor 3. Disconnect interconnection cables (between sensors) to isolate the faulty obstruction sensor(s). Begin by disconnecting one of the bottom leg cover sensors from the circuit. Check Bed UP button on footboard staff control. If illuminated, continue by disconnecting the other bottom leg cover sensor. Check Bed UP button on footboard staff control. If illuminated, continue by disconnecting one caster cover sensor from the circuit. Continue this process until the Bed UP button is no longer illuminated 4. Reconnect obstruction sensor cables for functional obstruction sensors. Confirm Bed UP button is not illuminated 5. Replace damaged obstruction sensor(s)

5.7 Troubleshooting Guide for Unique Features of Spirit Select™ Bed

Problem / Failure	Recommended Action
Footboard staff control does not power up No icons illuminate on Power Status Indicator and/or display does not activate	1. Check to see if the bed is operable. If not operable, check to ensure bed is connected to AC power. If not plugged in, connect bed to an AC power outlet and allow battery to recharge 2. Check to see if the bed is operable from either rail controls or pendant (if equipped). If bed is operable, continue to next step. If the bed is not operable from rail controls, check rail and pendant T-cable connections at rail and in CB10 control box 3. If bed is operable from footboard control, continue to next step. If the bed is not operable from the footboard control check above sections. Check footboard staff control cable connection into CB10 control box 4. If bed remains inoperable, check to see if a supply cable has been disconnected from the CB09 and/or the CB10 control box. Connect DC supply cable at both control boxes 5. If bed remains inoperable, either the DC supply cable and/or a component has failed. Replace DC supply cable 6. Replace footboard control 7. Replace CB10 control box
Bed will not run on DC power	1. Check to see if ATTN icon on the Power Status Indicator is illuminated. If illuminated, check to see if the battery has been disconnected from the CB10 control box. Connect DC plug into DC jack in the side of the CB10 control box 2. The battery is connected but voltage has dropped below 18VDC and the battery has been automatically disconnected from charging circuit. Ensure bed is connected (plugged in) to an AC power outlet, and allow battery to recharge. Confirm AC icon is solid green and the DC icon is flashing on the Power Status Indicator 3. If the ATTN icon of the Power Status Indicator remains on after lengthy recharge period, replace battery 4. If the ATTN icon of the Power Status Indicator remains on after battery replacement, replace CB10 control box
Patient weight not correct	1. Remove patient from bed. Zero scale. Allow patient to re-enter bed 2. Remove patient from bed. Calibrate scale. Allow patient to re-enter bed
Automatic bed exit light does not work	1. Confirm underbed lights work by toggling button on footboard control. If underbed lights turn on, continue to next step. If underbed lights do not turn on, check connection in CB10 control box. Replace underbed light 2. Check Bed Exit Light is set to on in Bed Exit Menu
Can't zero scale (establishing Tare value)	The bed cannot be zeroed if the bed is in a slight Trendelenburg or reverse Trendelenburg angle. Ensure that the LCD display is showing a TREND/rev.TREND angle of 0°. A slight bed angle may be difficult to notice 1. **PRESS and HOLD** the Trend button to level the mattress deck until the bed automatically stops motion. If the angle of the mattress deck becomes even more obvious, **PRESS and HOLD** the rev.TREND button. Refer to page 49 for instructions 2. Attempt to zero the scale
Can't set bed exit alarm	The bed exit alarm cannot be set if the bed has not been zeroed between patients. 1. Remove patient from bed. Zero scale. Allow patient to re-enter bed 2. Attempt to set bed exit alarm

5.8 CB10/CB11 Warnings

To aid in troubleshooting efforts, Spirit Select™ beds have the capability to display warnings on the LCD display

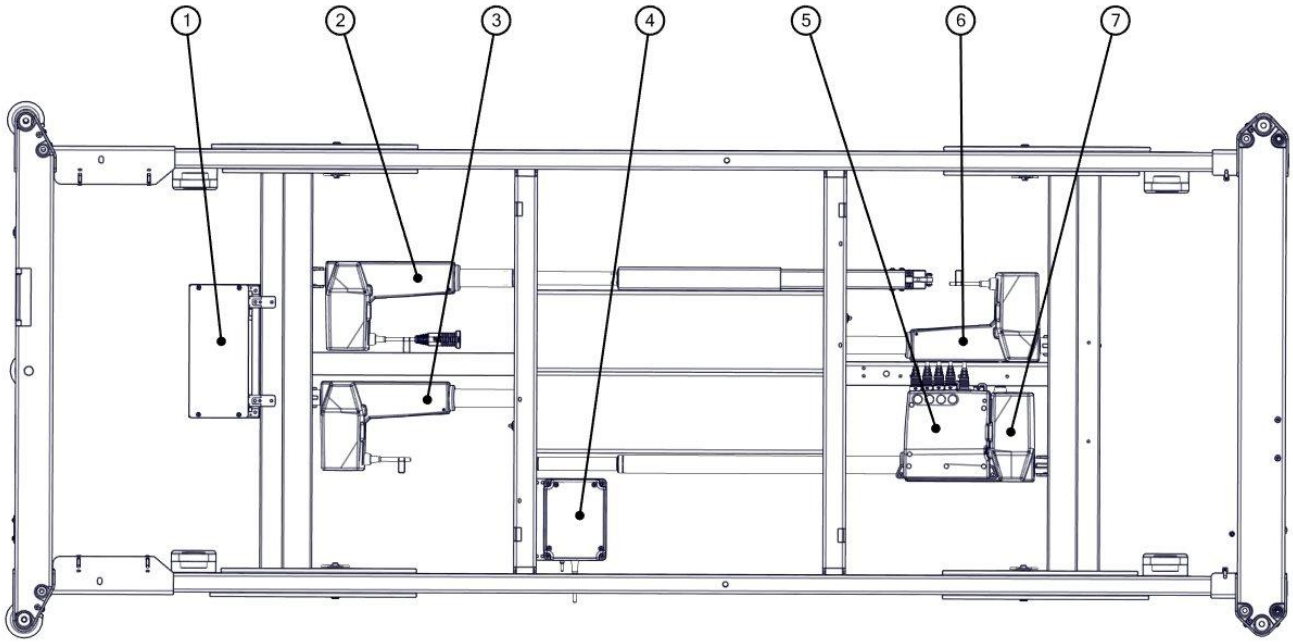
Warning	LCD Display	Details	Recommended Action
#100	Obstruction Head End Obstruction* Foot End Obstruction* Both End Obstruction*	Obstruction detected	1. Take recommended action listed in previous section
#102	Obs. Fault Head End Obs. Fault* Foot End Obs. Fault* Both End Obs. Fault*	Failure in obstruction sensor system	1. Take recommended action listed in previous section
#104	Obstruction Sensor Disabled	Obstruction sensor system has been disabled in the service menu	1. Fix problem(s) responsible for the deactivation of obstruction sensor system 2. Re-enable obstruction sensor system
#122	CPR Fault Right CPR Fault* Left CPR Fault* Both CPR Fault*	Failure in manual CPR release system	1. Check CPR PULL handle wiring for damage and for connection in CB10/CB11 control box 2. Check switch under CPR PULL handle to ensure that it is still being engaged by lever on handle 3. Call for CHG Hospital Beds Customer Service for technical assistance
#124	CPR Switch Disabled	CPR switch has been disabled in the Maintenance Menu	1. Fix problem(s) responsible for the deactivation of CPR switch 2. Re-enable CPR switch
#140	Battery Disconnected	Battery is not connected to CB10/CB11 control box	1. Connect battery to CB10/CB11 control box
#142	Low Battery	Battery is not fully charged	1. Connect bed to an AC power outlet and allow battery to recharge
#144	Battery Charge Fault	Battery is not holding charge	1. Replace battery
#202	Head Angle Sensor Fault	CB10/CB11 control box lost communication with head angle sensor	1. Check head angle sensor wiring for damage and for connection in CB10/CB11 control box and connection at the head angle sensor 2. Replace head angle sensor
#204	Head Angle Sensor Disabled	Head angle sensor has been disabled in the Maintenance Menu	1. Fix problem(s) responsible for the deactivation of head angle sensor 2. Re-enable head angle sensor
#260*	Brake Off	Central Lock & Steer is not in the "BRAKE" position	1. Engage brake
#262*	Brake Fault	Failure in brake sensor system	1. Check brake sensor wiring for damage and for connection in CB10/CB11 control box 2. Check/replace brake sensor switch
#280*	Head Rail Lock Fault	Failure in PL or PR head siderail lock sensor system	1. Check siderail lock sensor wiring for damage and for connection in CB10/CB11 control box 2. Check/replace siderail lock switch
#282*	Foot Rail Lock Fault	Failure in PL or PR foot siderail lock sensor system	
#302	Head Angle Range Error	Measured head deck (back rest) angle is out of normal range	1. Calibrate angles. See 105 to begin Angle calibration procedure

**Message displayed on beds equipped with CB11 control box only.*

NOTE: For help troubleshooting these or any other fault codes not listed above please contact CHG Hospital Beds' Customer Service for further assistance at (519) 963-4010 or Toll Free 1-866-516-5446.

5.9 Schematics & Technical

5.9.1 Spirit Wiring Schematic



ITEM	KIT #	KIT DESCRIPTION
1	S0150	Service Kit, CB10 Lite (FOR USE WITH PLUS BEDS)
	S0151	Service Kit, CB10 Full (FOR USE WITH SELECT BEDS)
	S0093	Service Kit, CB10 CPR (FOR USE WITH SELECT + CPR BEDS)
	S0229	Service Kit, CB11 Assembly (FOR USE WITH SELECT + WD BEDS)
	S0272	Service Kit, CB11 Maternity (FOR USE WITH SELECT + MATERNITY BEDS)
2	S0060	Service Kit, Head Actuator, Low Rails
	S0166	Service Kit, Head Actuator, High Rails
	S0061	Service Kit, Head Actuator, CPR
3	S0367	Service Kit, HI-LO Actuator Foot Mounted
4	S0379	Service Kit, 24VDC Battery Assembly (Plate Mount)
5	S0094	Service Kit, CB09, 120V
6	S0366	Service Kit, HI-LO Actuator Head Mounted
7	S0059	Service Kit, Foot Actuator

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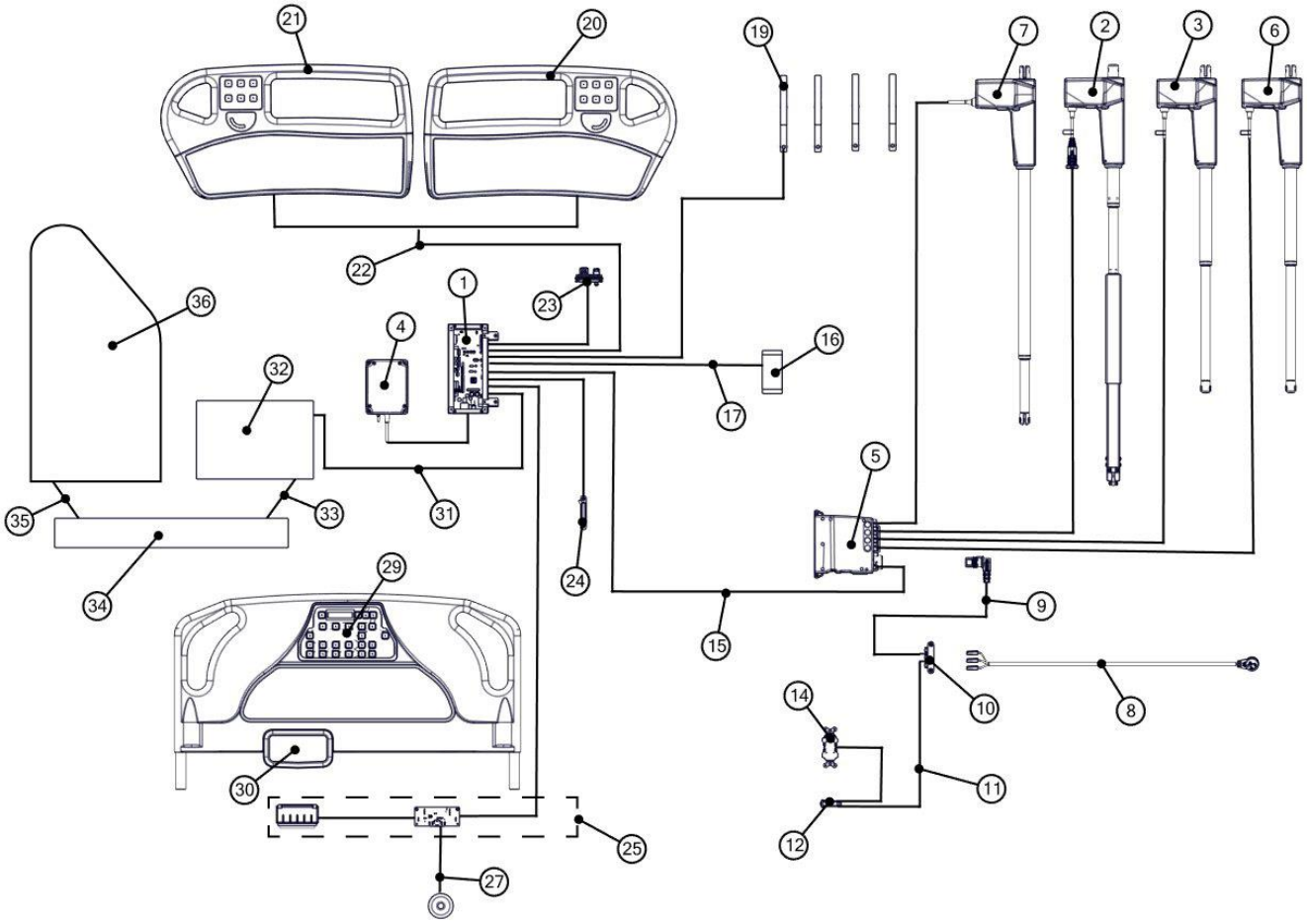

ITEM	KIT #	KIT DESCRIPTION
1-7		SEE ELECTRICAL COMPONENTS
8	S0133	Service Kit, Mains AC Supply Cable
9	S0134	Service Kit, Internal Mains AC Supply Cable
10	S0132	Service Kit, Mains AC Terminal Block
11	S0135	Service Kit, Auxiliary Outlet Mains Cable
12	S0137	Service Kit, Thermal Circuit Breaker, 5 AMP
14	S0136	Service Kit, Hospital Grade Duplex Receptacle
15	S0139	Service Kit, CB09 to CB10 Communication Cable
	S0140	Service Kit, CB09 to CB10 Power Cable
16	S0092	Service Kit, Inclinometer Assembly
17	S0143	Service Kit, Inclinometer Cable
18	S0130	Service Kit, Load Cell Assembly (4)
20/21		SEE RAIL PANEL COMPONENTS
22	S0141	Service Kit, T-Cable, Siderail Controls
	S0168	Service Kit, T-Cable, Siderail Controls + CPR
	S0169	Service Kit, T-Cable, Siderail Controls + CPR + WD
23	S0138	Service Kit, Patient Station Cable
	S0344	Service Kit, Patient Station Cable (FOR USE WITH CB11 BEDS)
24	S0131	Service Kit, Underbed Light
25	S0376	Service Kit, 6P Blindmate Connector Assembly Complete
	S0377	Service Kit, 6P Blindmate Connector Assembly WD Complete
27	S0246	Service Kit, WD Light Assembly
29/30		SEE FOOTBOARD COMPOENTS
31	S0129	Service Kit, Obstruction Sensor CB10 Cable
	S0330	Service Kit, Obstruction Sensor CB11 Cable
32	S0314	Service Kit, Top Leg Obstruction Sensor
33	S0128	Service Kit, Obstruction Sensor Link Cable (4 PIN)
34	S0311	Service Kit, Caster Cover Obstruction Sensor
35	S0380	Service Kit, Obstruction Sensor Link Cable (6 PIN)
36	S0193	Service Kit, Bottom Leg Obstruction Sensor

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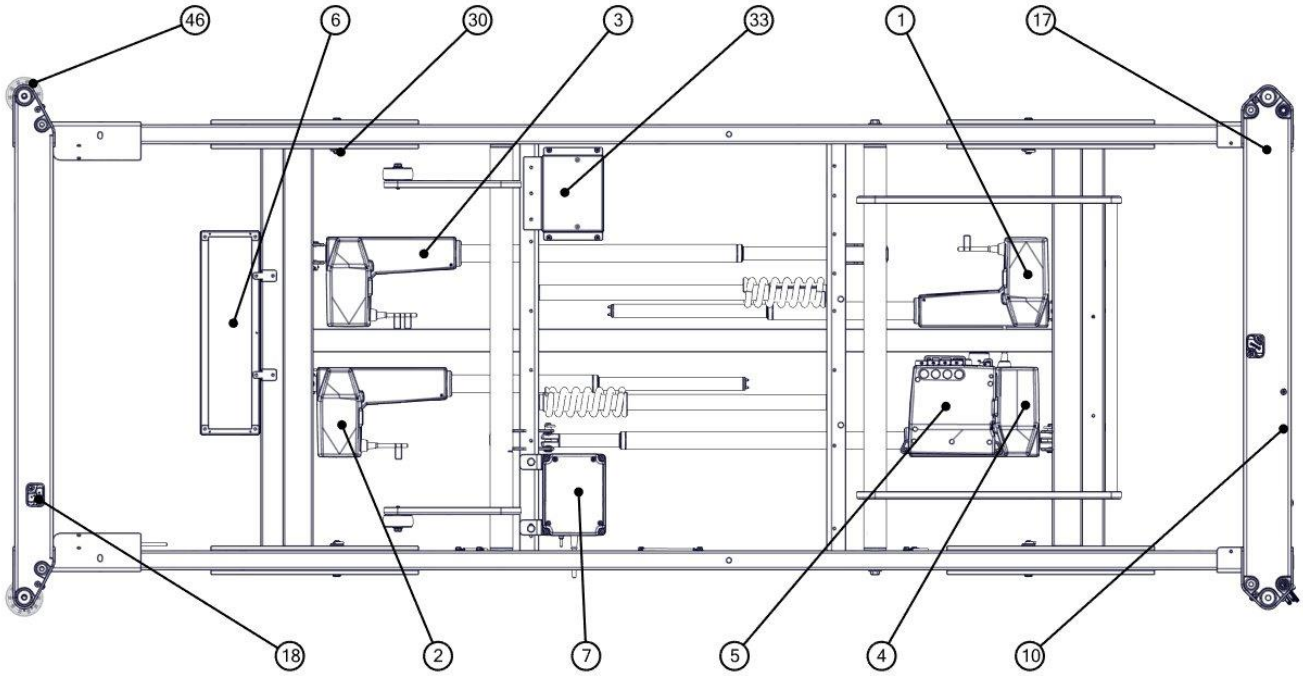
5.9.2 Spirit Select™ with OIML Scale Wiring Schematic



ITEM	KIT #	KIT DESCRIPTION
1	S0053	Service Kit, HI-LO Actuator Head Mounted
2	S0055	Service Kit, HI-LO Actuator Foot Mounted
3	S0060	Service Kit, Head Actuator, Low Rails
	S0166	Service Kit, Head Actuator, High Rails
	S0061	Service Kit, Head Actuator, CPR
4	S0059	Service Kit, Foot Actuator
5	S0203	Service Kit, CB09, 230V
6	S0229	Service Kit, CB11 Assembly (FOR USE WITH SELECT + WD BEDS)
	S0272	Service Kit, CB11 Maternity (FOR USE WITH SELECT + MATERNITY BEDS)
7	S0379	Service Kit, 24VDC Battery Assembly (Plate Mount)
10	S0132	Service Kit, Mains AC Terminal Block
17	S0344	Service Kit, Patient Station Cable (FOR USE WITH CB11 BEDS)
18	S0052	Service Kit, Foot Board Bracket Cable Select
30	S0356	Service Kit, OIML Load Cell Assembly
33	S0350	Service Kit, OIML Scale Box Assembly
46	S0246	Service Kit, Watchdog Light Assembly
	S0247	Service Kit, Watchdog Light Jumper Cable
	S0248	Service Kit, Watchdog Light CB11 Cable

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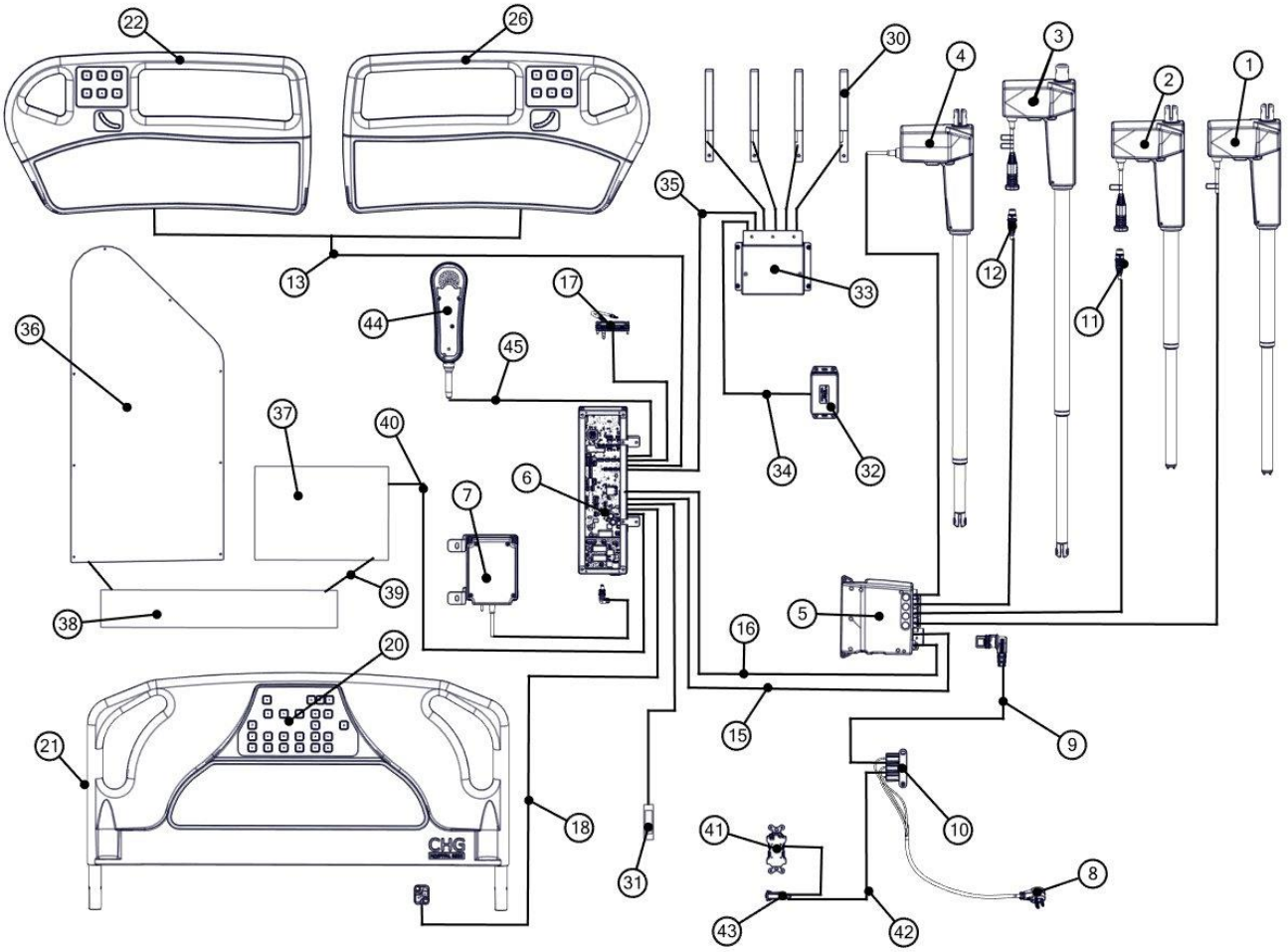

ITEM	KIT #	KIT DESCRIPTION
1-7		SEE ELECTRICAL COMPONENTS
8	S0282	Service Kit, Mains Ac Supply Cable (230V)
9	S0360	Service Kit, Internal Mains AC Supply Cable (230V)
10	S0132	Service Kit, Mains AC Terminal Block
11	S0127	Service Kit, Hi-Lo Actuator Extension Cable
12	S0126	Service Kit, Head Actuator Extension Cable
13	S0141	Service Kit, T-Cable, Siderail Controls
	S0168	Service Kit, T-Cable, Siderail Controls + CPR
	S0169	Service Kit, T-Cable, Siderail Controls + CPR + WD
14	S0026	Service Kit, T-Cable Pendant (Course Threads) – [*Not shown*]
15	S0139	Service Kit, CB09 to CB10 Communication Cable
16	S0140	Service Kit, CB09 to CB10 Power Cable
17	S0344	Service Kit, Patient Station Cable (FOR USE WITH CB11 BEDS)
18	S0052	Service Kit, Foot Board Bracket Cable Select
19	S0091	Service Kit, Foot Board Staff Control Cable Select – [*Not shown*]
20/21		SEE FOOTBOARD COMPOENTS
22/26		SEE SIDE RAIL COMPONENTS
30	S0356	Service Kit, OIML Load Cell Assembly
31	S0131	Service Kit, Underbed Light
32	S0092	Service Kit, Inclinometer Assembly
33	S0350	Service Kit, OIML Scale Box Assembly
34	S0381	Service Kit, Inclinometer Cable (OIML Beds)
35	S0382	Service Kit, OIML Scale Box Power/Comm Cable
36	S0193	Service Kit, Bottom Leg Obstruction Sensor
37	S0314	Service Kit, Top Leg Obstruction Sensor
38	S0311	Service Kit, Caster Cover Obstruction Sensor
39	S0128	Service Kit, Obstruction Sensor Link Cable (4 PIN)
	S0380	Service Kit, Obstruction Sensor Link Cable (6 PIN)
40	S0330	Service Kit, Obstruction Sensor CB11 Cable
41	S0383	Service Kit, Hospital Grade Receptacle (230V)
42	S0135	Service Kit, Auxiliary Outlet Mains Cable
43	S0137	Service Kit, Thermal Circuit Breaker, 5 AMP
44	Call CHG	PILLOW SPEAKER
45	S0353	Service Kit, Pillow Speaker T-Cable

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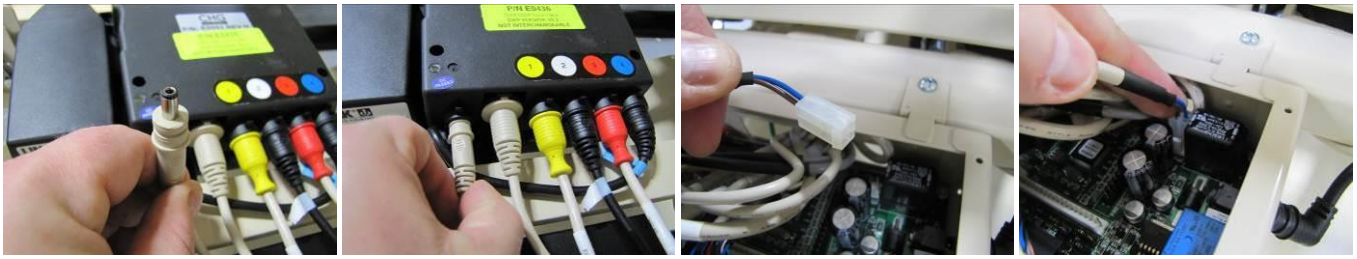
5.9.3Electrical Connections – Overview

CB09 Control Box
CB09 is common to all Spirit™ beds
IMPORTANT: CB09 Control boxes are **NOT** interchangeable!

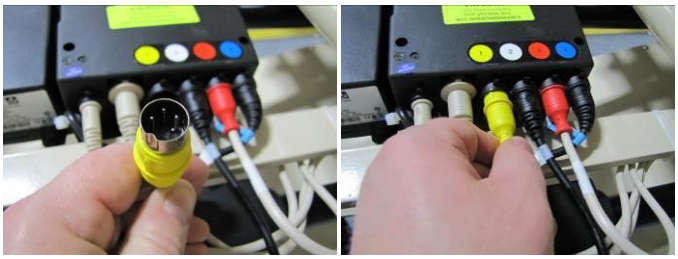
CB10 Control Box
CB10Lite control box – Spirit Plus™
CB10Full control box – Spirit Select™

CB11 Control Box
CB11 is use on Spirit Select™ when equipped with Electronic Foot Siderail Release



DC Power Cable (Ø5.5 mm X Ø2.5 mm male plug end)
Provides 24VDC power from CB09 control box to DC power input header on CB10/CB11 control box

Communication Cable (8 pin, DIN style, double keyed connector)
Carries communication between CB09 control box and COMM header on CB10/CB11 control box



Colour Code

Yellow: Hi-Lo Actuator (Mounted at Foot End of Bed)

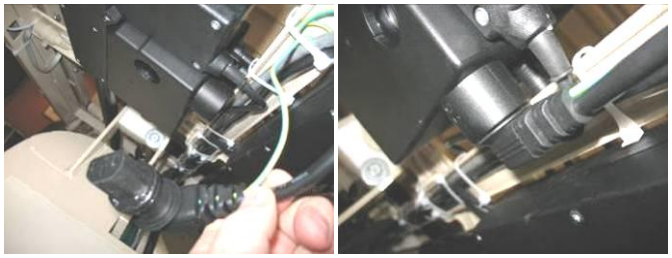
White (tape): Hi-Lo Actuator Extension Cable (Mounted at Head End of Bed)

Red: Head Actuator Extension Cable

Blue (tape): Knee Actuator

Actuator Cable Plug (4 pin, DIN style, double keyed connector)
Hi-Lo Actuators are common for all Spirit™ beds. Head/Knee actuators are unique for each Spirit™ depending upon configuration

Foot Mounted Actuator Extension Cables (4 pin, DIN style, double keyed connector to 6 pin modular connector)
Connects foot mounted actuator cables to CB09 control box. Retainer requires small slot screwdriver to remove (arrow)



CB09 Control Box Power Supply Cable (IEC 320 C13 female plug end)
Typical on all beds

Battery Connection Cable (Ø5.5 mm X Ø2.5 mm male plug end)
Typical on all beds

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⚠ WARNING

ALWAYS ensure that bed is disconnected (unplugged) from mains AC power (wall outlet) before disconnecting/connecting any cable from/to either the CB10/CB11 or CB09 control boxes. Failure to do so may result in damage or degradation of control box circuit board components.

⚠ WARNING

Some versions of CB09 control boxes are NOT interchangeable.

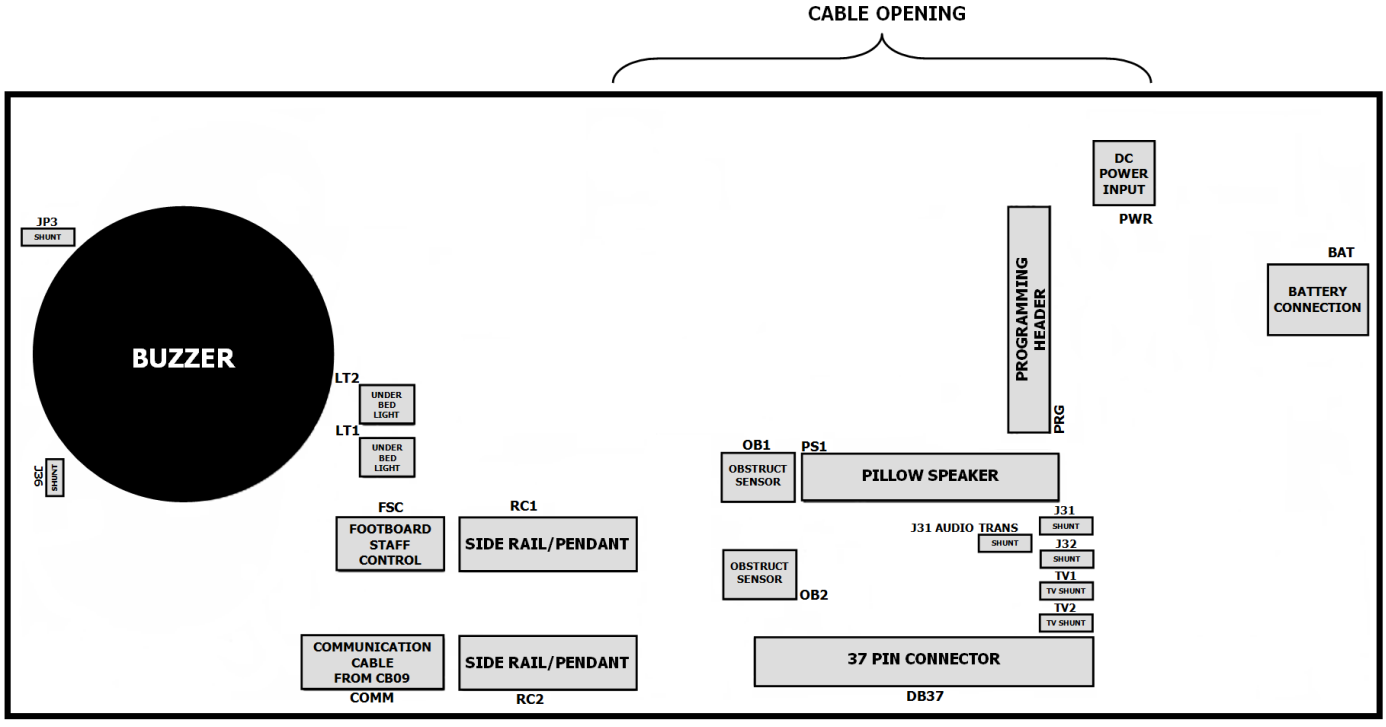
If your Spirit™ bed is not equipped with a CB10 control box but contains additional electrical components (such as a DJB Junction Box), then this bed uses an older version of the CB09 control box.

If you have to replace your CB09 control box call CHG Hospital Beds' Customer Service to ensure that you have the correct version of this component at (519) 963-4010 or Toll Free 1-866-516-5446.

5.9.4 Spirit Plus™ CB10Lite Control Box – Overview

CB10Lite cable connections shown: communication cable (p/n E0064), power cable (p/n E0067), footboard staff control cable (E0151), siderail t-cable (E0060), and patient station cable (E0078)

CB10Lite serial number label (affixed to enclosure next to battery connection)



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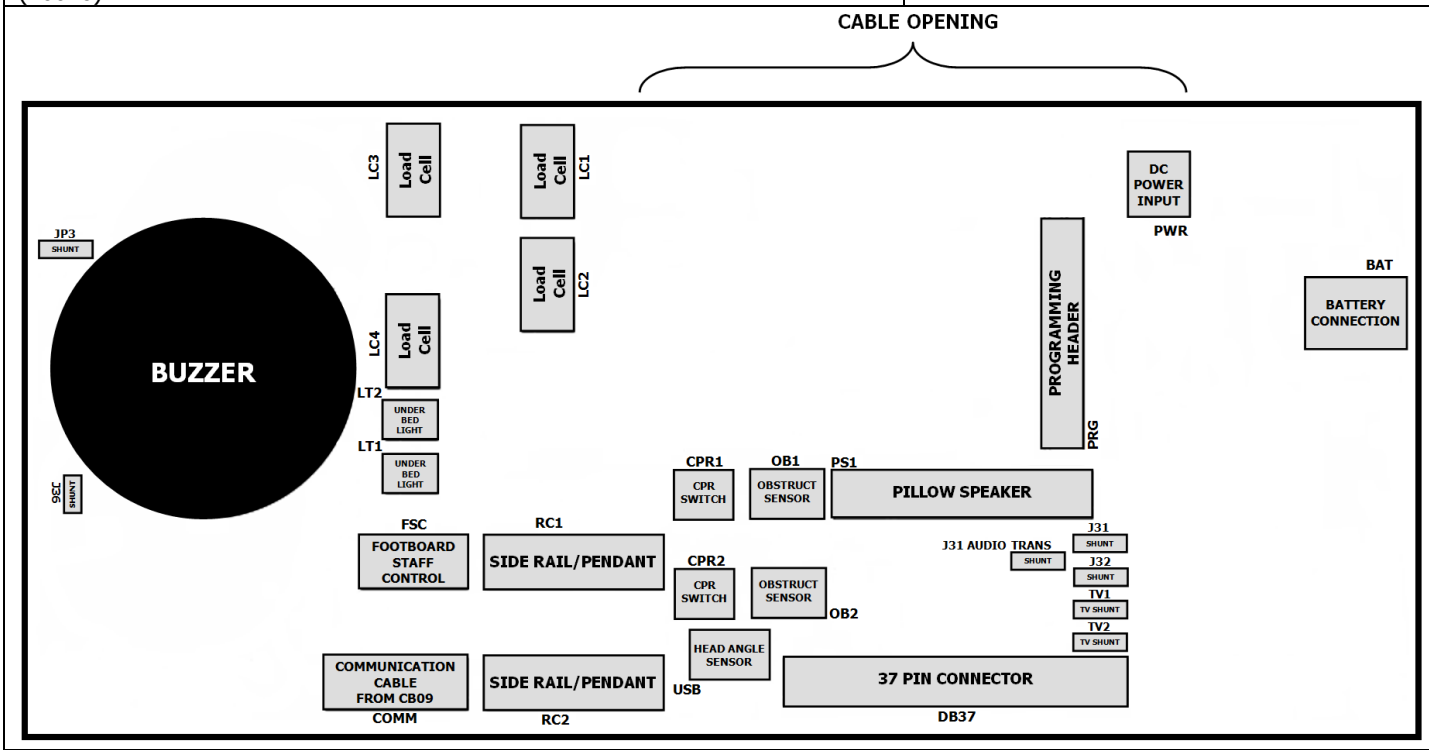
5.9.5 Spirit Select™ CB10Full Control Box – Overview

CB10Full cable connections shown: communication cable (p/n E0064), power cable (p/n E0067), footboard staff control cable (E0151), siderail t-cable (E0060), underbed lights (2 x E0088), load cells (4 x E0084)and patient station cable (E0078)

CB10Full serial number label (affixed to enclosure next to battery connection)



NOTE:	There are multiple connection points for the load cells, siderail controls, pendant, underbed lights, and obstruction sensors (if equipped). The bed will operate properly with these features connected to any of their respective connection points, however, if load cell cables are plugged into different connection points, the bed **MUST** be recalibrated.

⚠ WARNING

Some versions of CB10 control box are **NOT** interchangeable and **MUST NOT** be installed on some beds. Bed may not operate as intended if incorrect version of the CB10 control box is used.

ALWAYS confirm replacement part numbers are the same prior to installation. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

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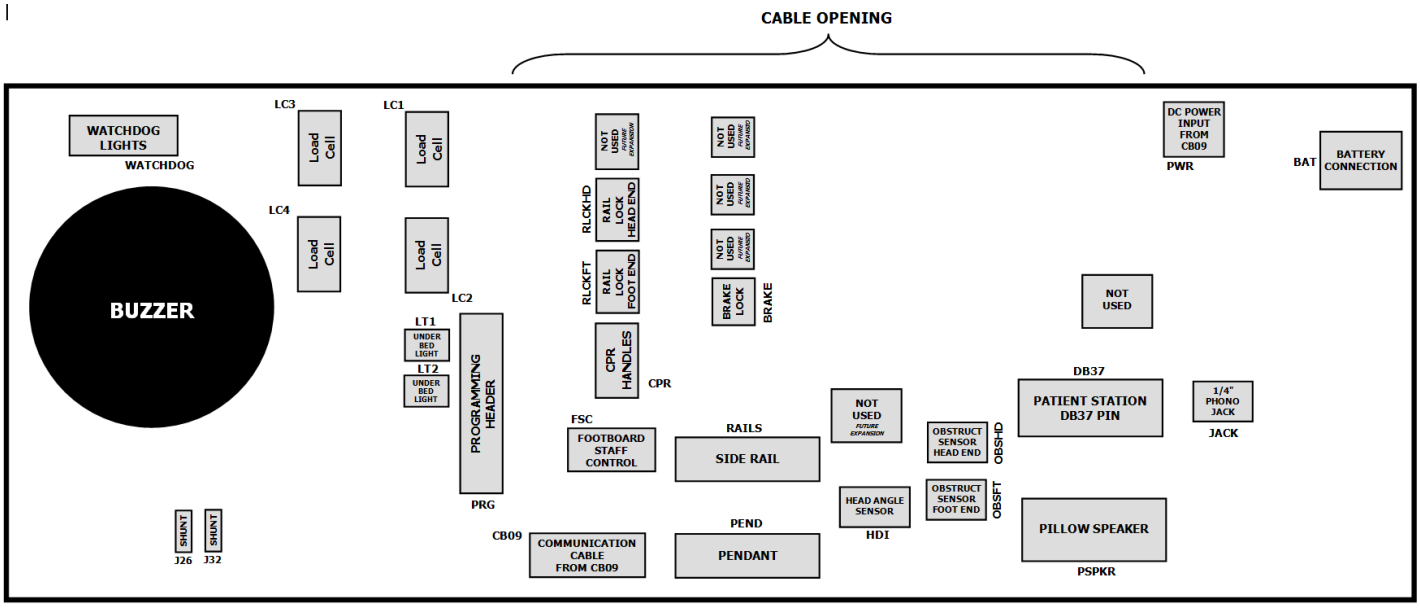
5.9.6 Spirit Select™ CB11 Control Box – Overview

CB11 cable connections shown: communication cable (p/n E0064), power cable (p/n E0067), footboard staff control cable (E0070), siderail t-cable (E0060 or E0410 if bed equipped with manual CPR release), underbed lights (2 x E0088), load cells (4 x E0084), patient station cable (E0417), 1/4" phono jack cable (E0418), battery cable panel mounted link cable (E0385), siderail lock detection cable (Head: E0356, Foot: E0357), brake lock detection cable (E0341), and Watchdog cable (E0358)

CB11 serial number label (affixed to enclosure next to battery connection)



NOTE:	To ensure proper bed operation each feature **MUST** be connected to their respective connection points. There are 4 load cell connection points and any load cell cable may be connected to any one of them. If, for any reason, load cell cables are plugged into different connection points, the bed **MUST** be recalibrated.

⚠ WARNING

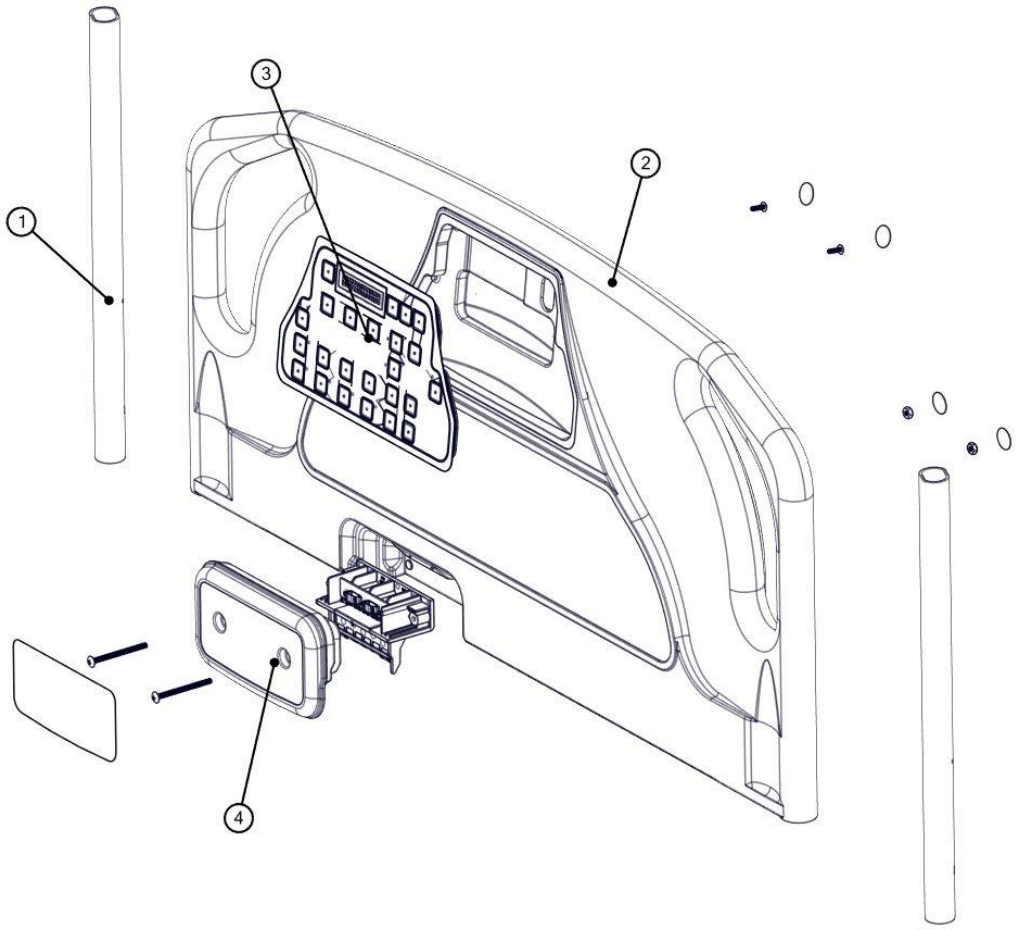
Control box are **NOT** interchangeable and **MUST NOT** be installed on some beds. Bed may not operate as intended if incorrect control box is used. **DO NOT** attempt to install a CB10 control box on beds originally equipped with the CB11 control box.

ALWAYS confirm replacement part numbers are the same prior to installation. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

5.10 Service Parts

NOTE: Service parts shown reflect current production Spirit™ beds. If you are servicing an older Spirit™ bed, or if you have any doubts/concerns, please contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 to ensure that you receive the correct parts.

SELECT FOOTBOARD



ITEM	KIT #	KIT DESCRIPTION
1	S0384	Service Kit, Footboard Post
	S0323	Service Kit, Psych Footboard Post
2	S0385	Service Kit, Select Footboard Complete (USA)
	S0386	Service Kit, Select Footboard Complete (CAN)
	S0387	Service Kit, Select Footboard Complete (UK)
	S0388	Service Kit, Select Footboard Complete Psych (USA)
	S0389	Service Kit, Select Footboard Complete Psych (CAN)
	S0390	Service Kit, Select Footboard Complete Psych (UK)
3	S0391	Service Kit, Select Footboard Staff Control (USA)
	S0392	Service Kit, Select Footboard Staff Control (CAN)
	S0393	Service Kit, Select Footboard Staff Control (UK)
4	S0394	Service Kit, Footboard Blindmate 6 Pin

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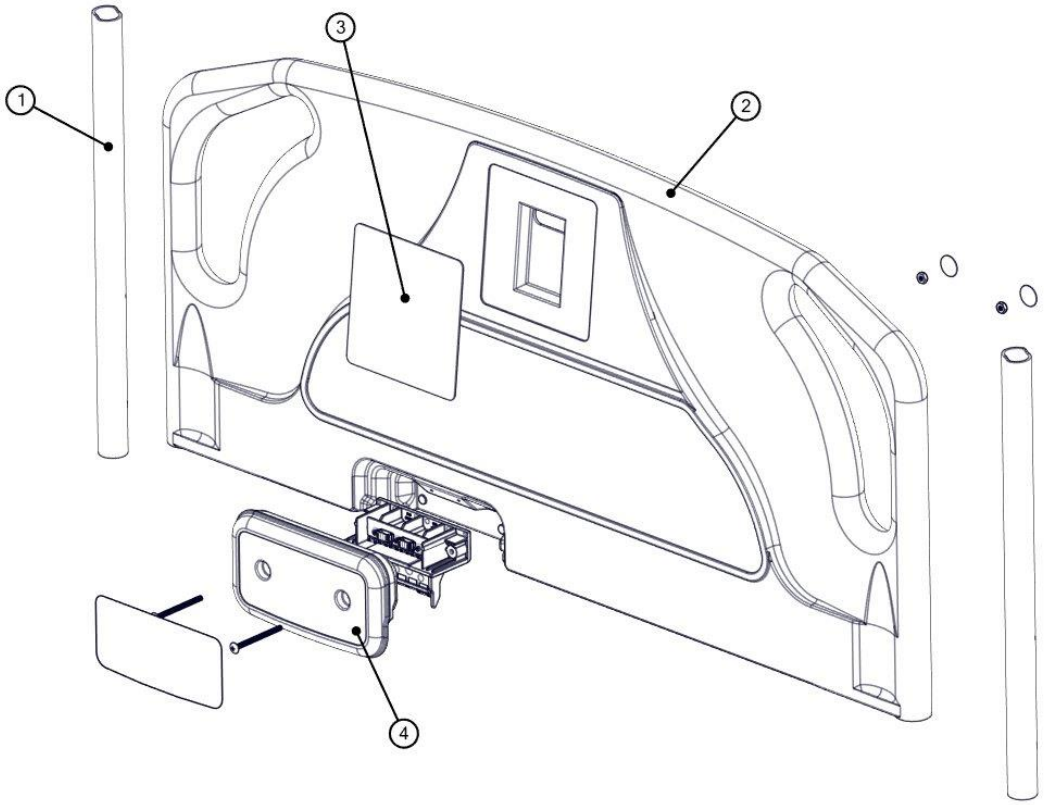
PLUS FOOTBOARD



ITEM	KIT #	KIT DESCRIPTION
1	S0384	Service Kit, Footboard Post
	S0323	Service Kit, Psych Footboard Post
2	S0395	Service Kit, Plus Footboard Complete
	S0396	Service Kit, Plus Footboard Complete Psych
3	S0044	Service Kit, Plus Footboard Staff Control
4	S0394	Service Kit, Footboard Blindmate 6 Pin

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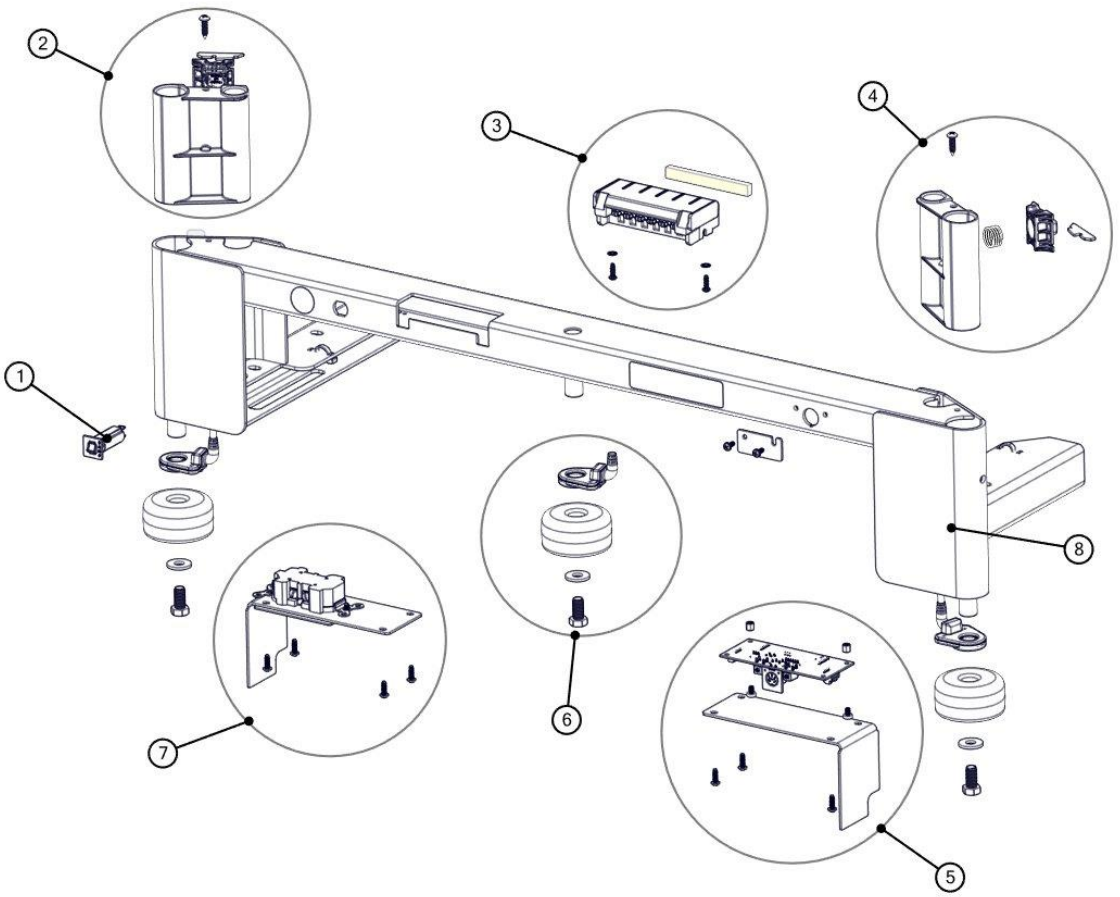
FOOTBOARD BRACKET with WATCHDOG



ITEM	KIT #	KIT DESCRIPTION
1	S0137	Service Kit, Thermal Circuit Breaker, 5 Amp
2	S0117	Service Kit, Footboard Bracket Insert PR
3	S0397	Service Kit, Footboard Bracket Blindmate 6 Pin Connector
4	S0118	Service Kit, Footboard Bracket Insert PL
5	S0398	Service Kit, Watchdog Intermediate Board and Cover
6	S0399	Service Kit, Footboard Light and Bumper Assembly
7	S0400	Service Kit, Auxiliary Outlet and Cover (120V)
	S0401	Service Kit, Auxiliary Outlet and Cover (230V)
	S0402	Service Kit, PR Footboard Bracket Cover
8	S0403	Service Kit, Footboard Bracket Complete (WD)

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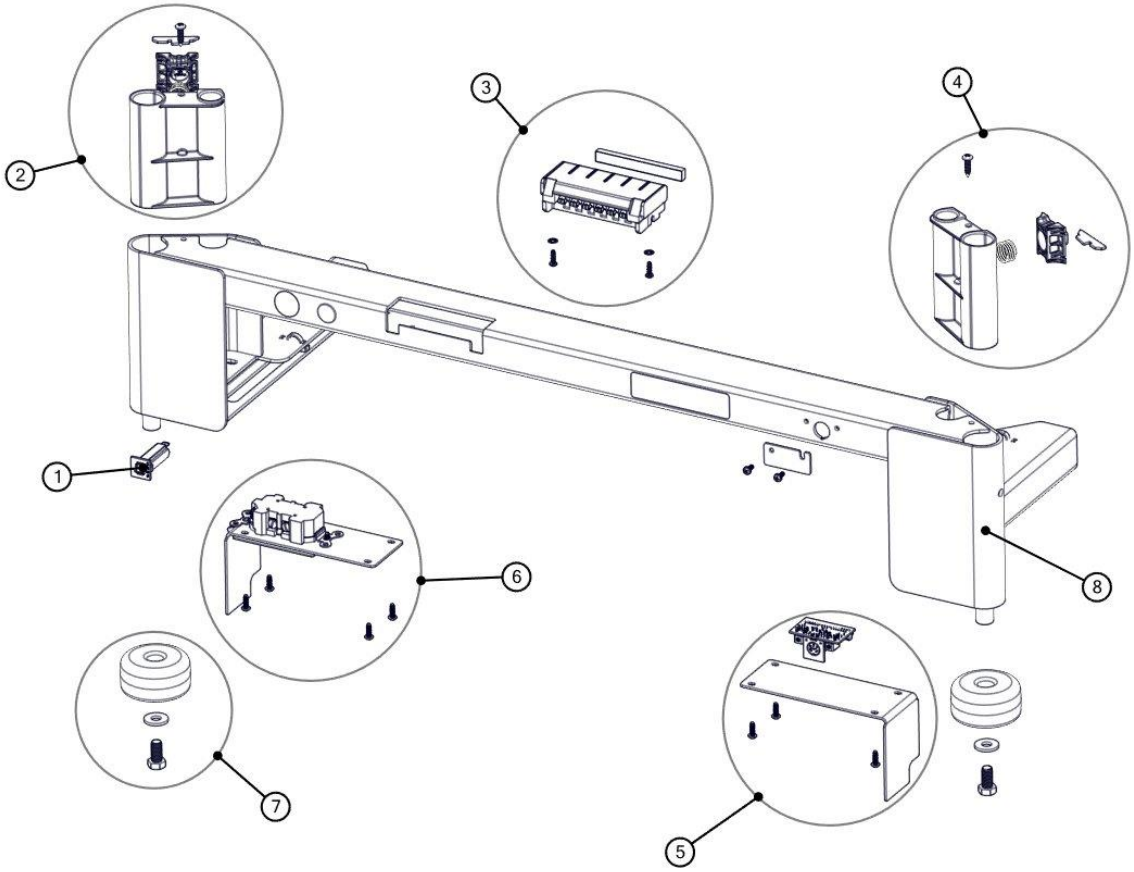
FOOTBOARD BRACKET



ITEM	KIT #	KIT DESCRIPTION
1	S0137	Service Kit, Thermal Circuit Breaker, 5 Amp
2	S0117	Service Kit, Footboard Bracket Insert PR
3	S0397	Service Kit, Footboard Bracket Blindmate 6 Pin Connector
4	S0118	Service Kit, Footboard Bracket Insert PL
5	S0404	Service Kit, WD Bypass Intermediate Board and Cover
6	S0027	Service Kit, Footboard Bracket Corner Bumper
7	S0400	Service Kit, Auxiliary Outlet and Cover (120V)
	S0401	Service Kit, Auxiliary Outlet and Cover (230V)
	S0402	Service Kit, PR Footboard Bracket Cover
8	S0405	Service Kit, Footboard Bracket Complete Assembly

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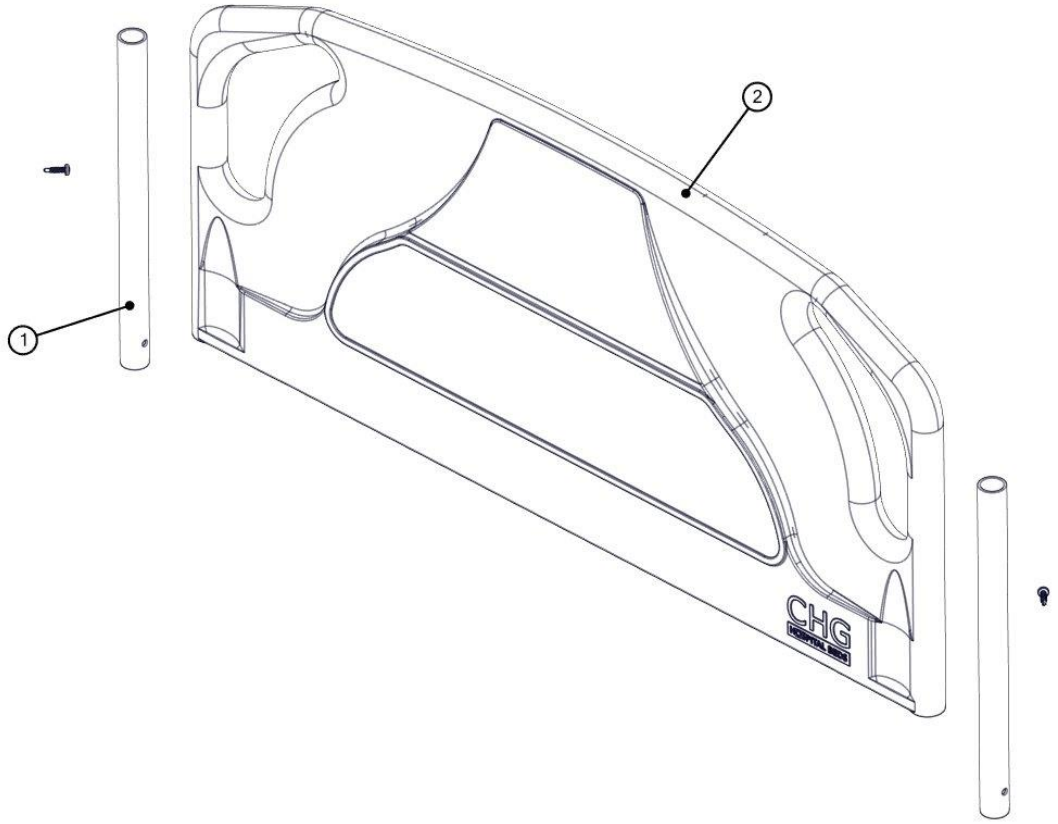
HEADBOARD



ITEM	KIT #	KIT DESCRIPTION
1	S0384	Service Kit, Footboard Post
	S0383	Service Kit, Psych Footboard Post
2	S0113	Service Kit, Headboard Complete
	S0188	Service Kit, Psych Headboard Complete

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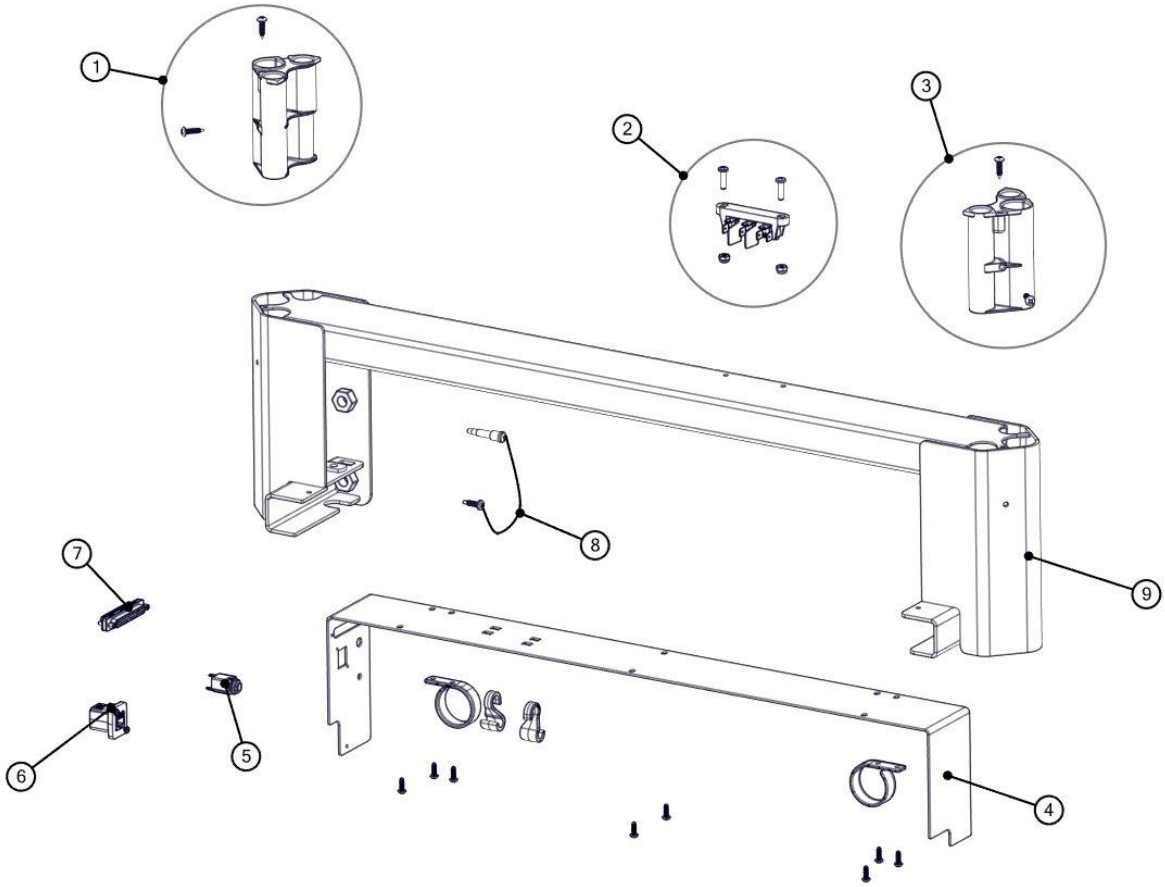
HEADBOARD BRACKET (HIGH RAIL BEDS)



ITEM	KIT #	KIT DESCRIPTION
1	S0115	Service Kit, Headboard Bracket Insert PR
2	S0132	Service Kit, Mains AC Terminal Block
3	S0116	Service Kit, Headboard Bracket Insert PL
4	S0406	Service Kit, High Headboard Bracket Cover
	S0407	Service Kit, High Headboard Bracket Cover (WD)
5	S0408	Service Kit, ¼" Jack Port (WD)
6	S0409	Service Kit, Ethernet Port (WD)
7	S0344	Service Kit, Patient Station Cable (WD)
	S0138	Service Kit, Patient Station Cable
8	S0011	Service Kit, ¼" Dummy Plug
9	S0410	Service Kit, High Headboard Bracket Complete (WD)
	S0411	Service Kit, High Headboard Bracket Complete

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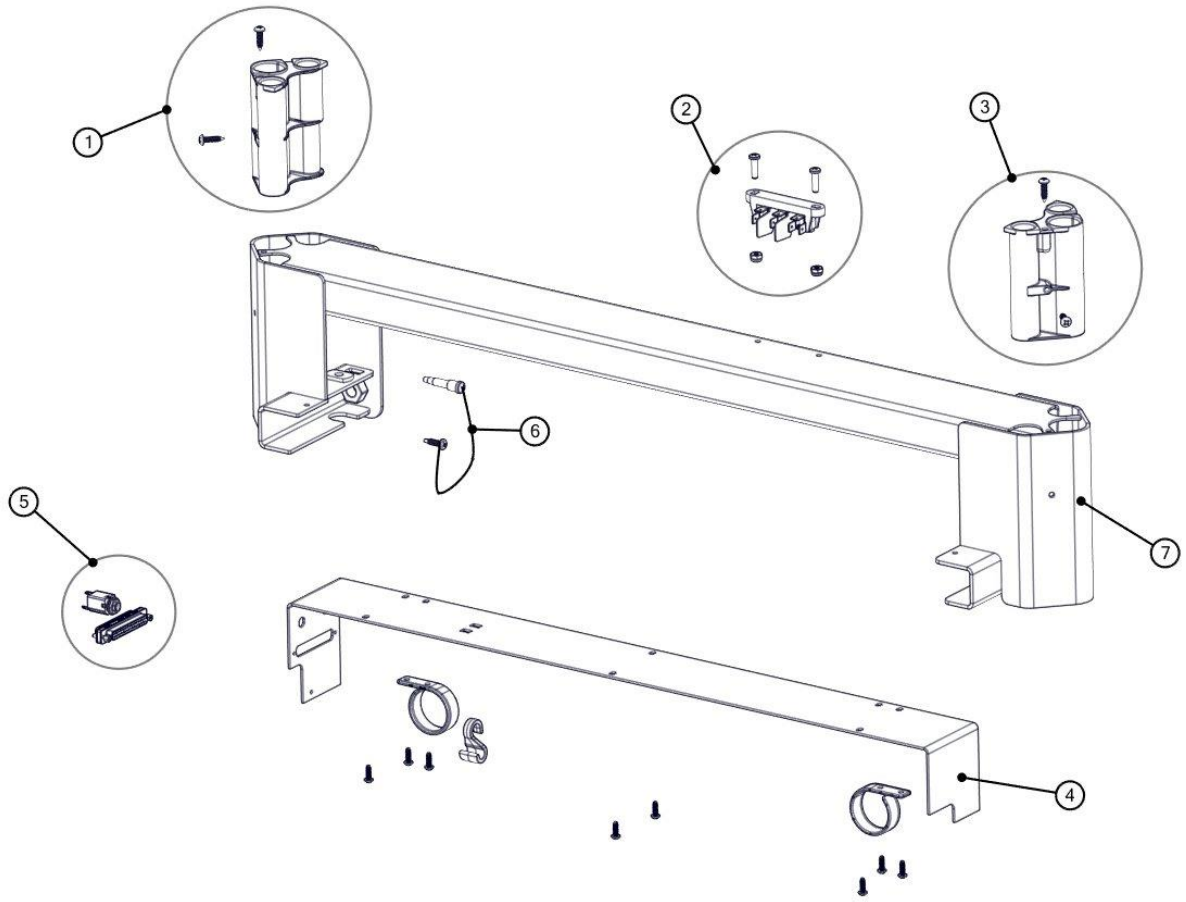
HEADBOARD BRACKET (LOW RAIL BEDS)



ITEM	KIT #	KIT DESCRIPTION
1	S0115	Service Kit, Headboard Bracket Insert PR
2	S0132	Service Kit, Mains AC Terminal Block
3	S0116	Service Kit, Headboard Bracket Insert PL
4	S0412	Service Kit, Headboard Bracket Cover
5	S0138	Service Kit, Patient Station Cable
6	S0011	Service Kit, ¼" Dummy Plug
7	S0413	Service Kit, Headboard Bracket Complete

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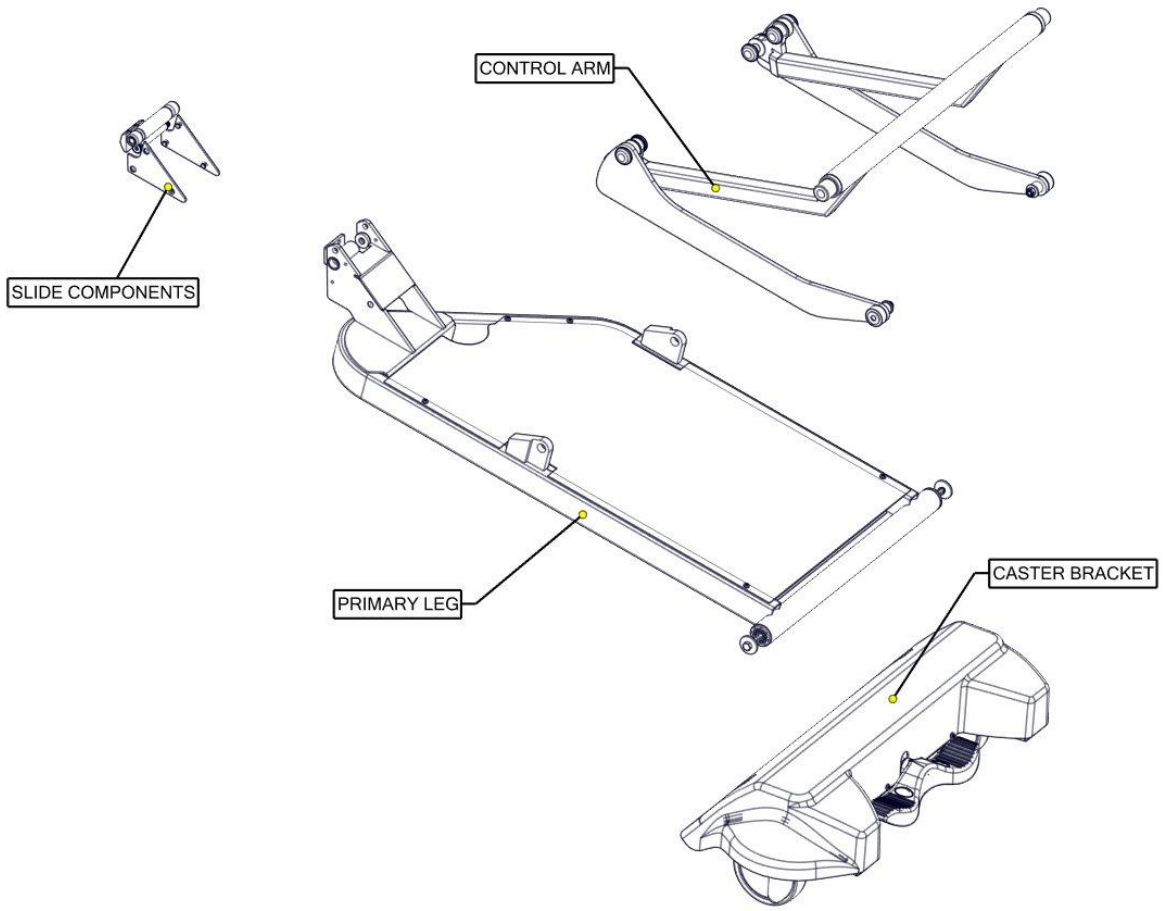
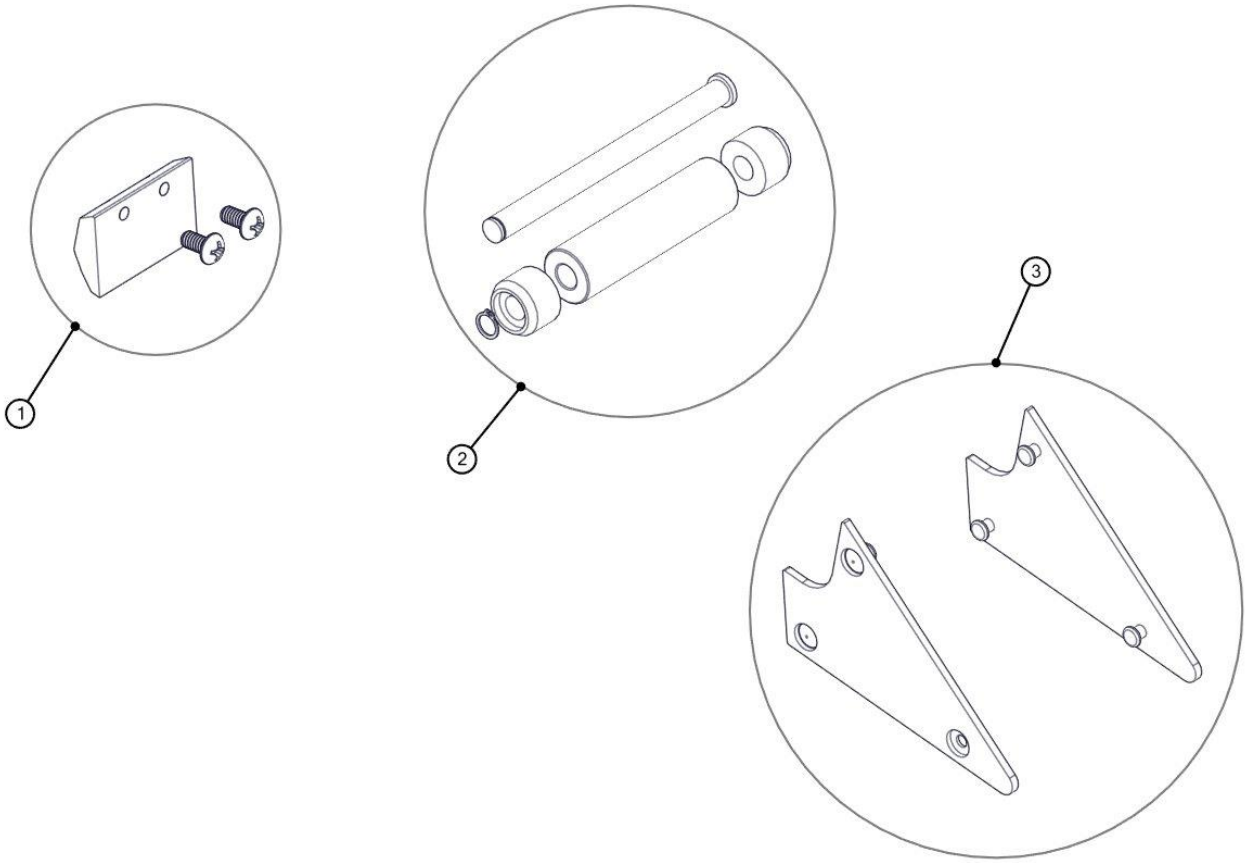
LEG ASSEMBLY



ITEM	KIT #	KIT DESCRIPTION
1		SEE SLIDE COMPONENTS
2		SEE CONTROL ARM
3		SEE CASTER BRACKET
4		SEE PRIMARY LEG

LEG ASSEMBLY - SLIDE COMPONENTS



ITEM	KIT #	KIT DESCRIPTION
1	S0414	Service Kit, Push Block Hi/Lo Spring
2	S0415	Service Kit, Leg Roller Assembly
3	S0416	Service Kit, Leg Bracket Wear Pads

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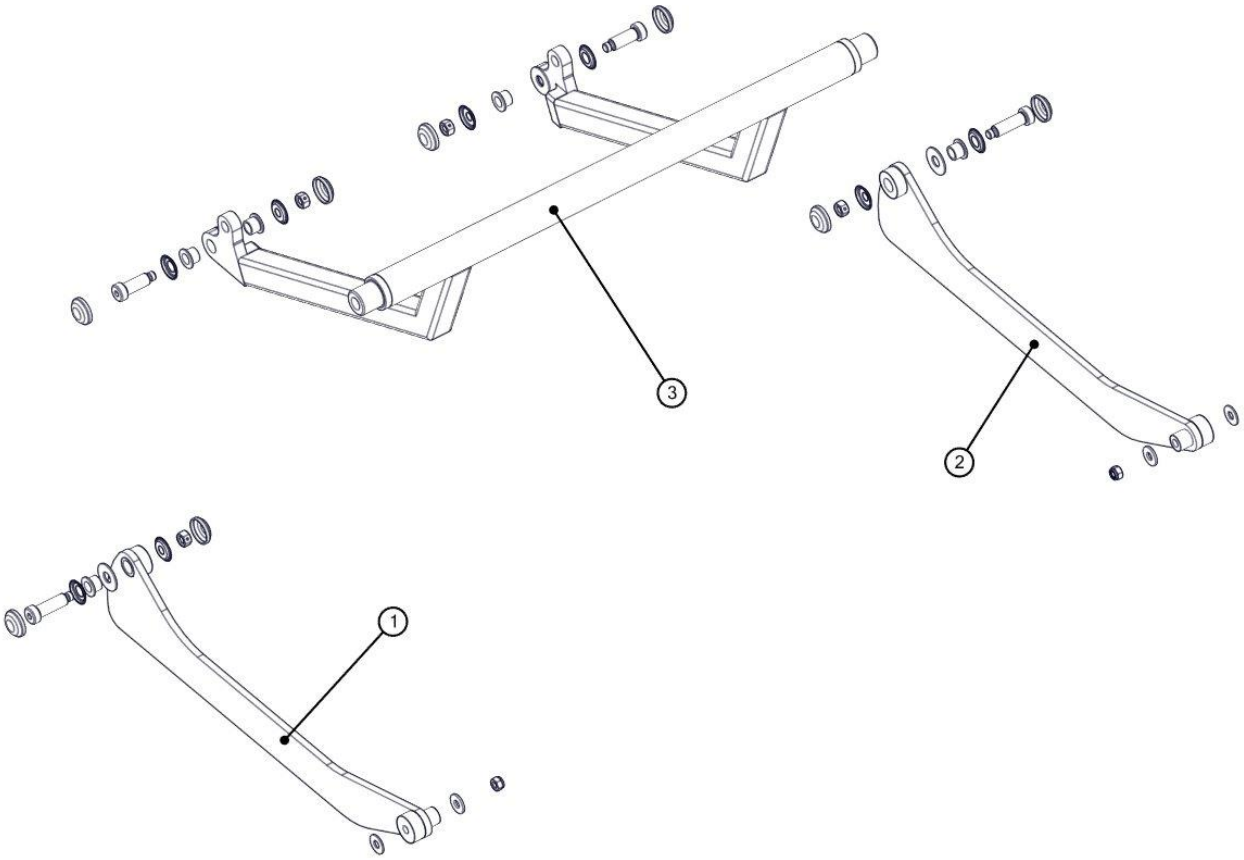
LEG ASSEMBLY - CONTROL ARM



ITEM	KIT #	KIT DESCRIPTION
1	S0244	Service Kit, Suspension Arm A
2	S0245	Service Kit, Suspension Arm B
3	S0417	Service Kit, Control Arm

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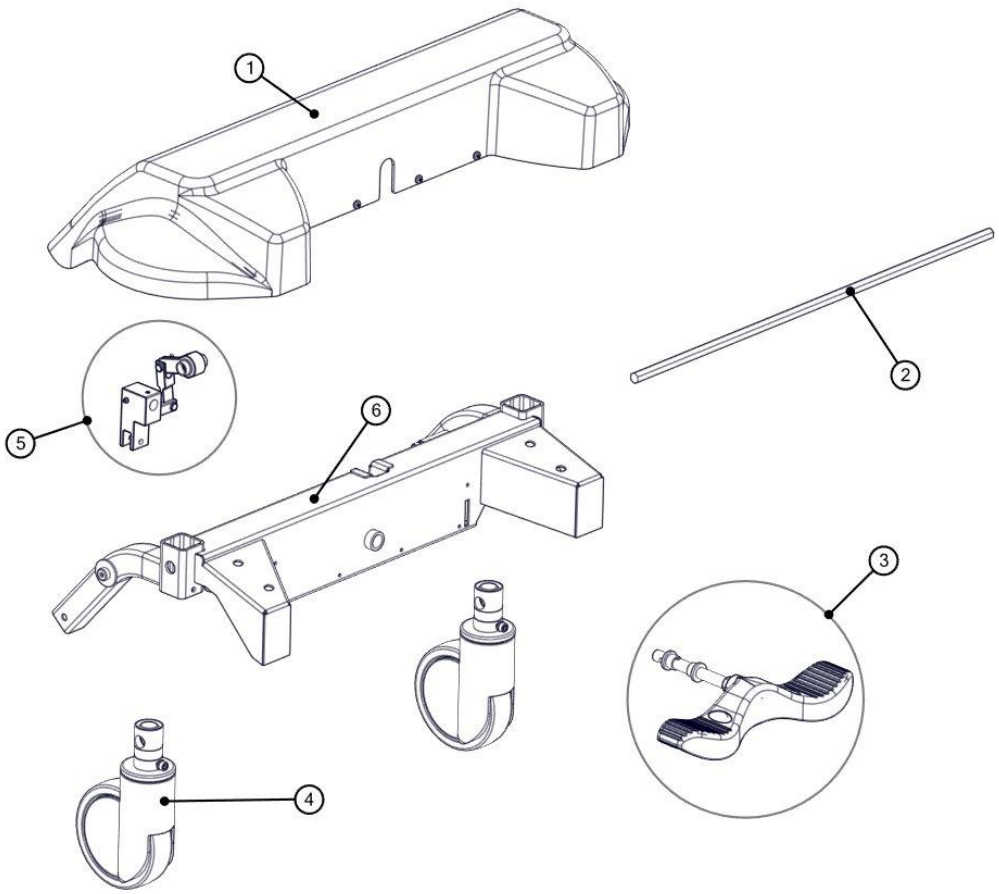
LEG ASSEMBLY – CASTER BRACKET



ITEM	KIT #	KIT DESCRIPTION
1	S0077	Service Kit, ABS Caster Cover
	S0161	Service Kit, ABS Caster Cover + OBS
	S0311	Service Kit, Caster Cover Obstruction Sensor
2	S0022	Service Kit, Caster Hex Rod
3	S0121	Service Kit, Brake Pedal Assembly (Head End)
	S0122	Service Kit, Brake Pedal Assembly (Foot End)
4	S0064	Service Kit, Head End Caster (Red Label)
	S0065	Service Kit, Foot End Caster (Green Label)
5	S0224	Service Kit, Complete Brake Pedal Linkage
6	S0103	Service Kit, Caster Assembly, Head, Complete
	S0104	Service Kit, Caster Assembly, Foot, Complete

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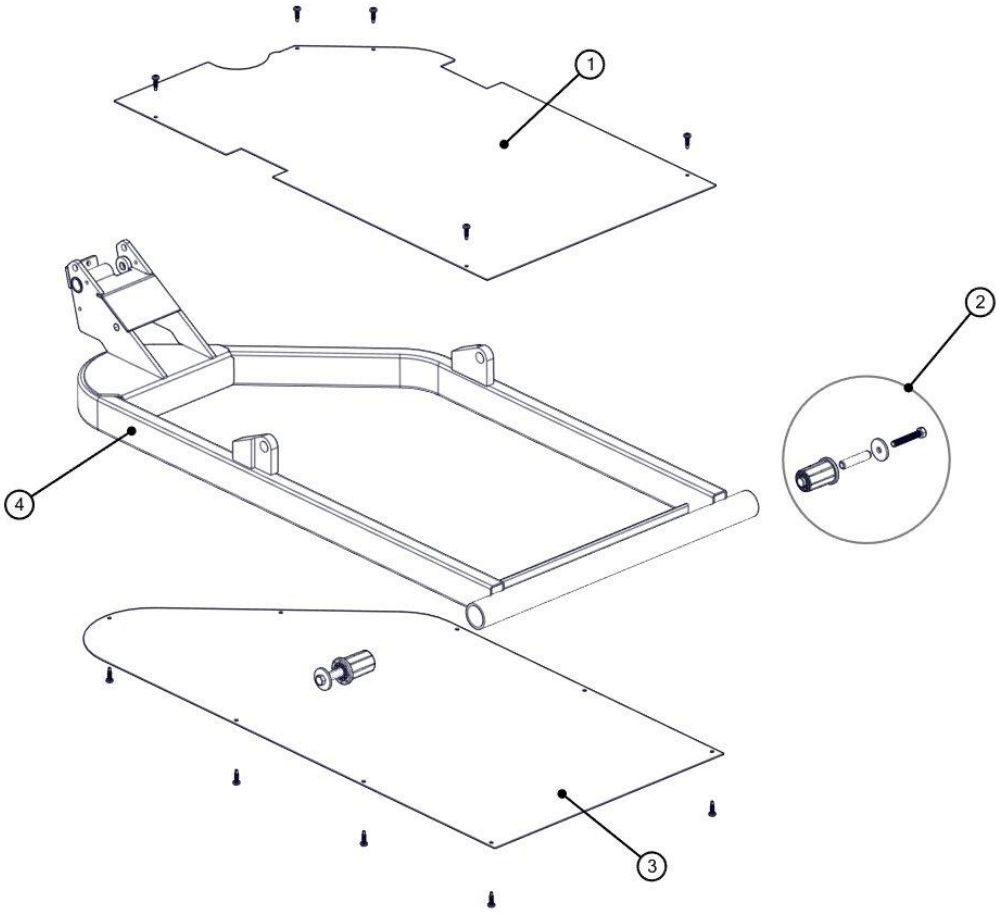
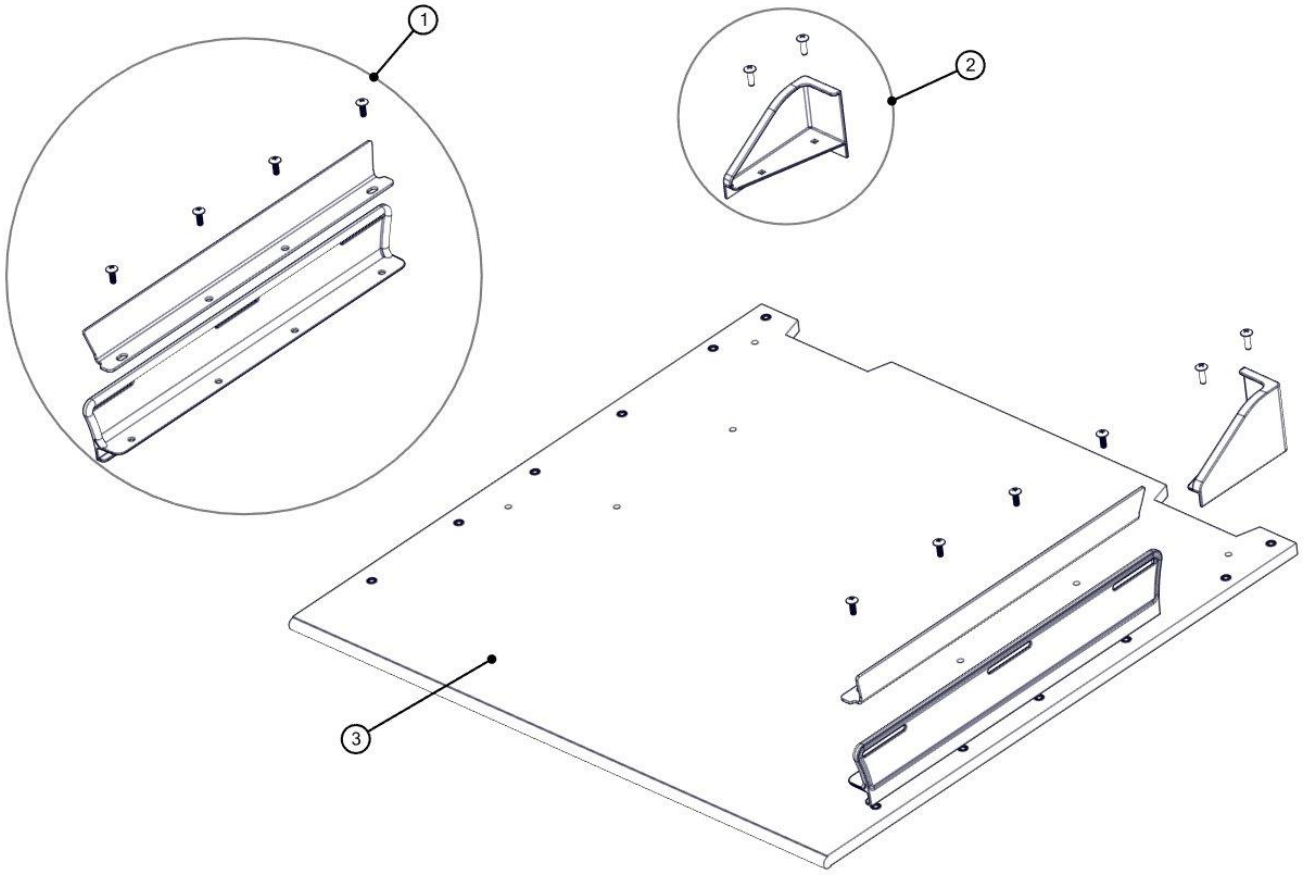
LEG ASSEMBLY – PRIMARY LEG



ITEM	KIT #	KIT DESCRIPTION
1	S0232	Service Kit, Top Leg Cover
	S0230	Service Kit, Top Leg Cover + OBS
	S0314	Service Kit, Top Leg Obstruction Sensor
2	S0239	Service Kit, Gatch Socket & Pin
3	S0233	Service Kit, Bottom Leg Cover
	S0160	Service Kit, Bottom Leg Cover + OBS
	S0193	Service Kit, Bottom Leg Obstruction Sensor
4	S0418	Service Kit, Primary Leg

HEAD DECK



ITEM	KIT #	KIT DESCRIPTION
1	S0419	Service Kit, Mattress Keeper & Stiffener
2	S0050-A	Service Kit, Corner Mattress Keeper A (PL Head/PR Foot)
	S0050-B	Service Kit, Corner Mattress Keeper B (PR Head/PL Foot)
3	S0089	Service Kit, Head Deck Assembly Complete

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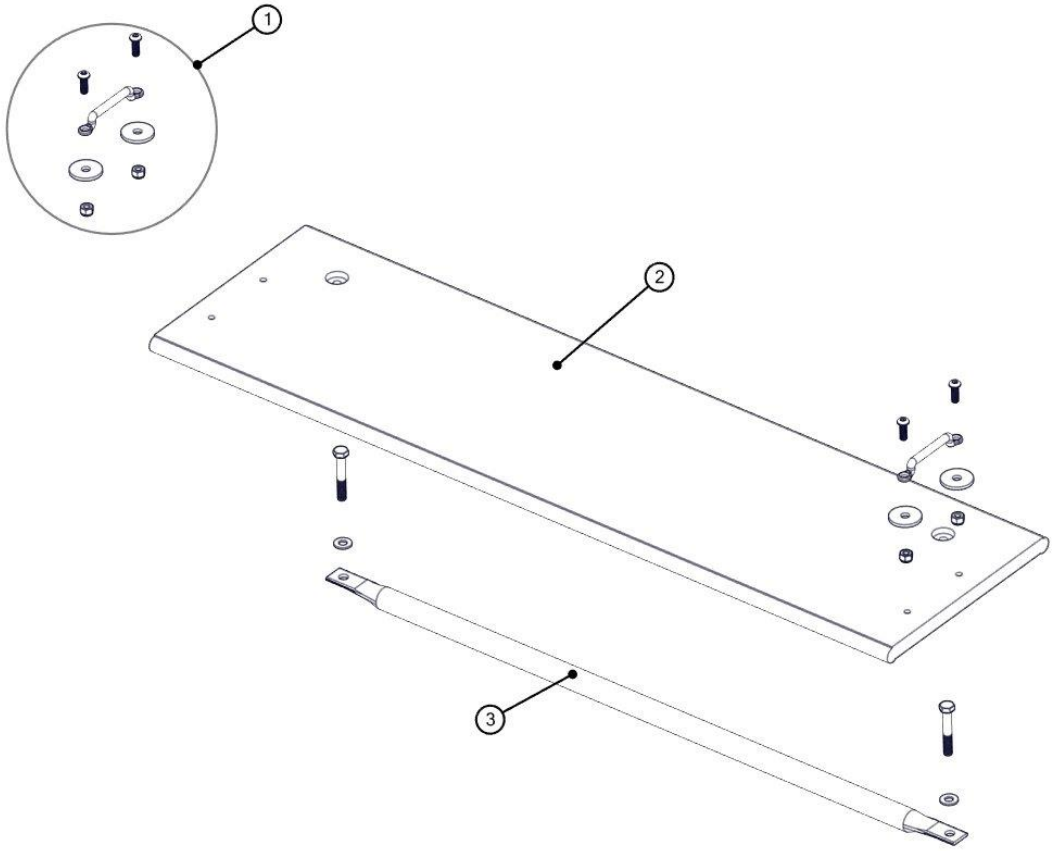
SEAT DECK



ITEM	KIT #	KIT DESCRIPTION
1	S0072	Service Kit, Restraint Loop
2	S0144	Service Kit, Seat Deck Assembly Complete
3	S0264	Service Kit, Seat Deck Support Tube

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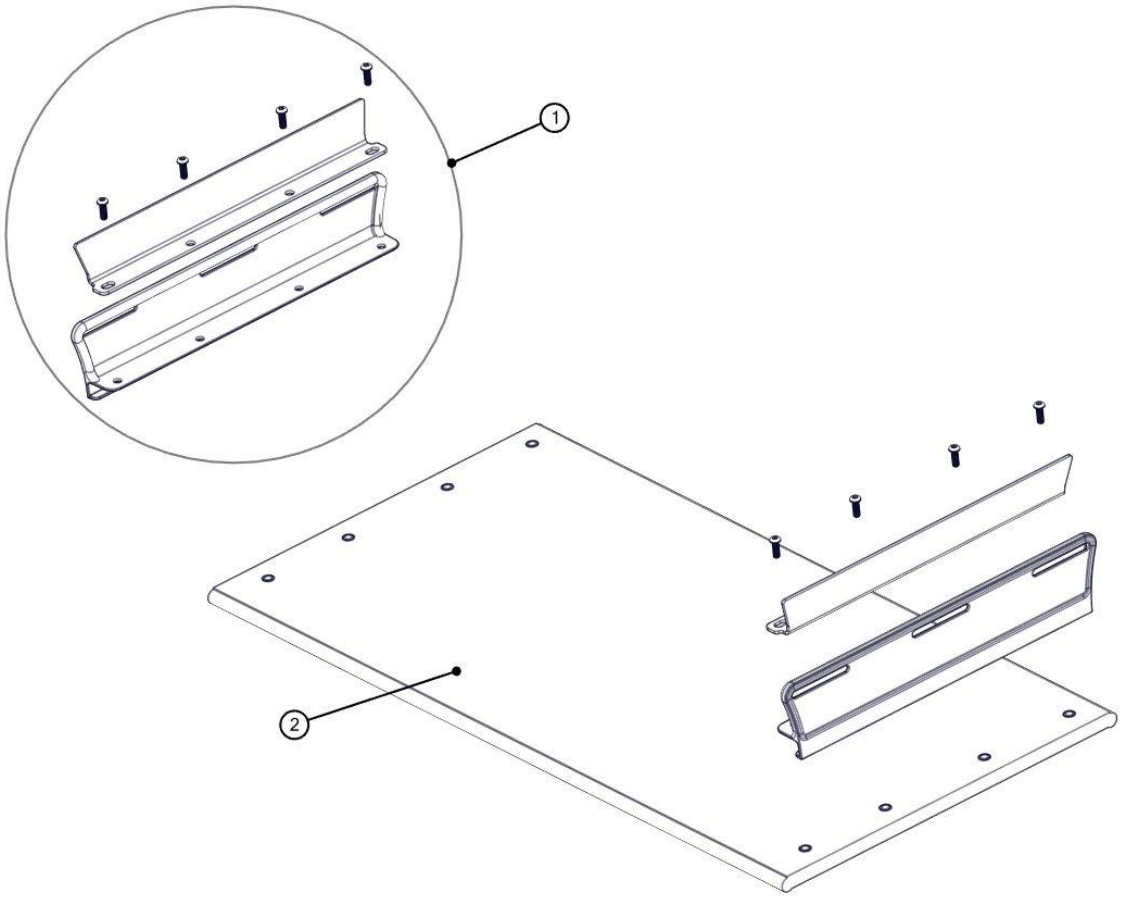
KNEE DECK



ITEM	KIT #	KIT DESCRIPTION
1	S0419	Service Kit, Mattress Keeper & Stiffener
2	S0090	Service Kit, Knee Deck Assembly Complete

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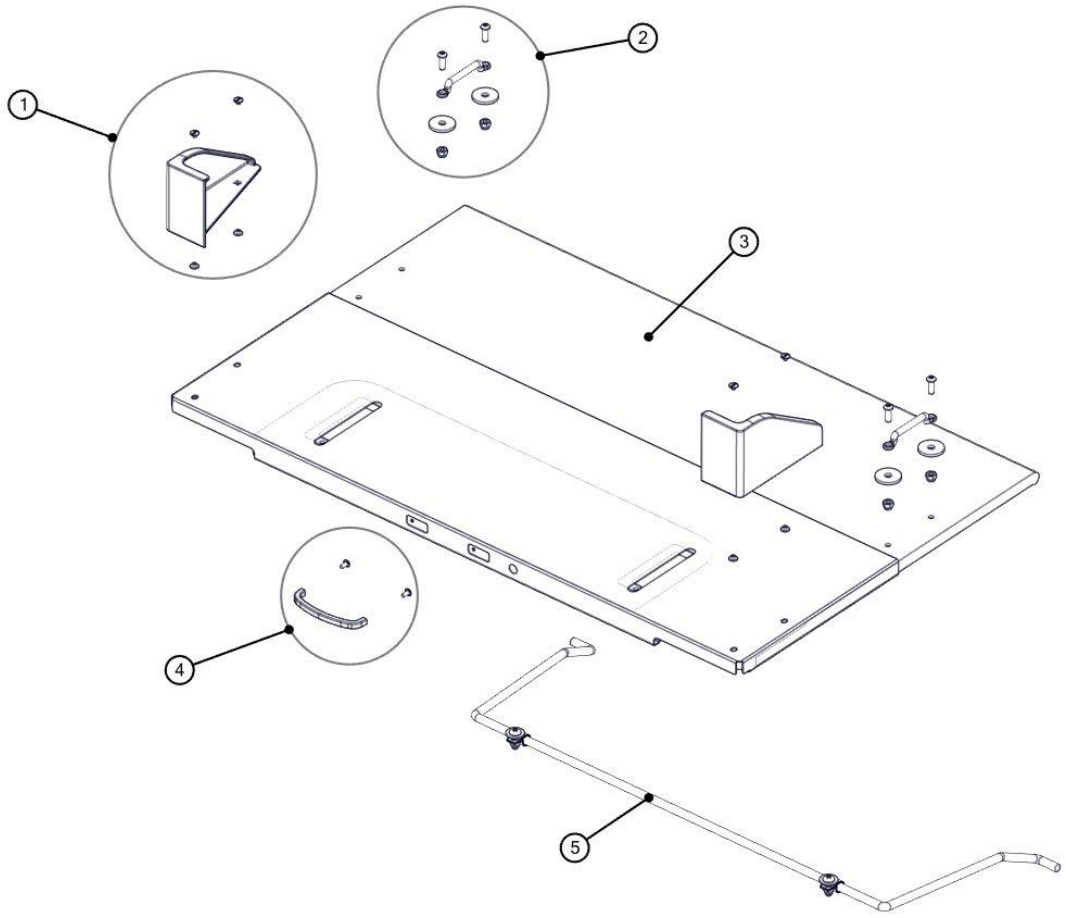
FOOT DECK



ITEM	KIT #	KIT DESCRIPTION
1	S0279	Service Kit, Foot Deck Extension Corner Mattress Keeper A (PR Foot)
	S0280	Service Kit, Foot Deck Extension Corner Mattress Keeper B (PL Foot)
	S0050-A	Service Kit, Corner Mattress Keeper A (PL Head/PR Foot)
	S0050-B	Service Kit, Corner Mattress Keeper B (PR Head/PL Foot)
2	S0072	Service Kit, Restraint Loop
3	S0086	Service Kit, Foot Deck Assembly Complete + Extension
	S0010	Service Kit, Foot Deck Assembly Complete
4	S0174	Service Kit, Extension Handle
5	S0119	Service Kit, Foot Bail

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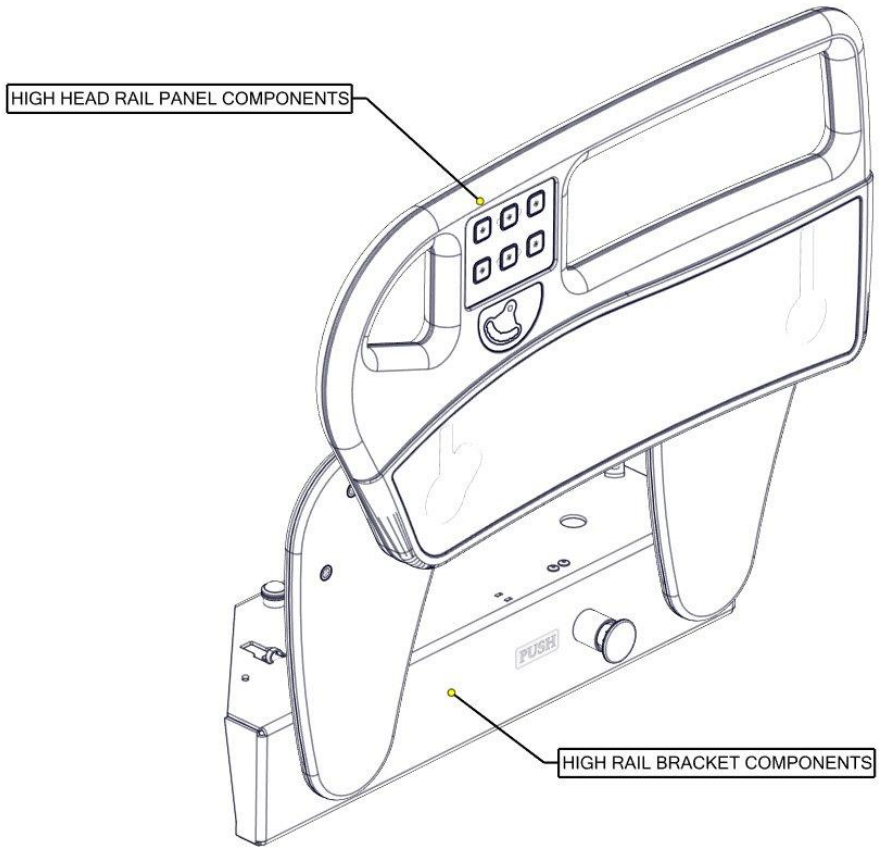
HIGH HEAD RAILS



ITEM	KIT #	KIT DESCRIPTION
1		SEE HIGH HEAD RAIL PANEL COMPONENTS
2		SEE HIGH HEAD RAIL BRACKET COMPONENTS

COMPLETE RAIL ASSEMBLIES

KIT #	KIT DESCRIPTION
S0095	Service Kit, High Head Rail & Bracket Assembly, PR
S0096	Service Kit, High Head Rail & Bracket Assembly, PL
S0249	Service Kit, High Head Rail & Bracket Assembly, PR FILLED
S0250	Service Kit, High Head Rail & Bracket Assembly, PL FILLED

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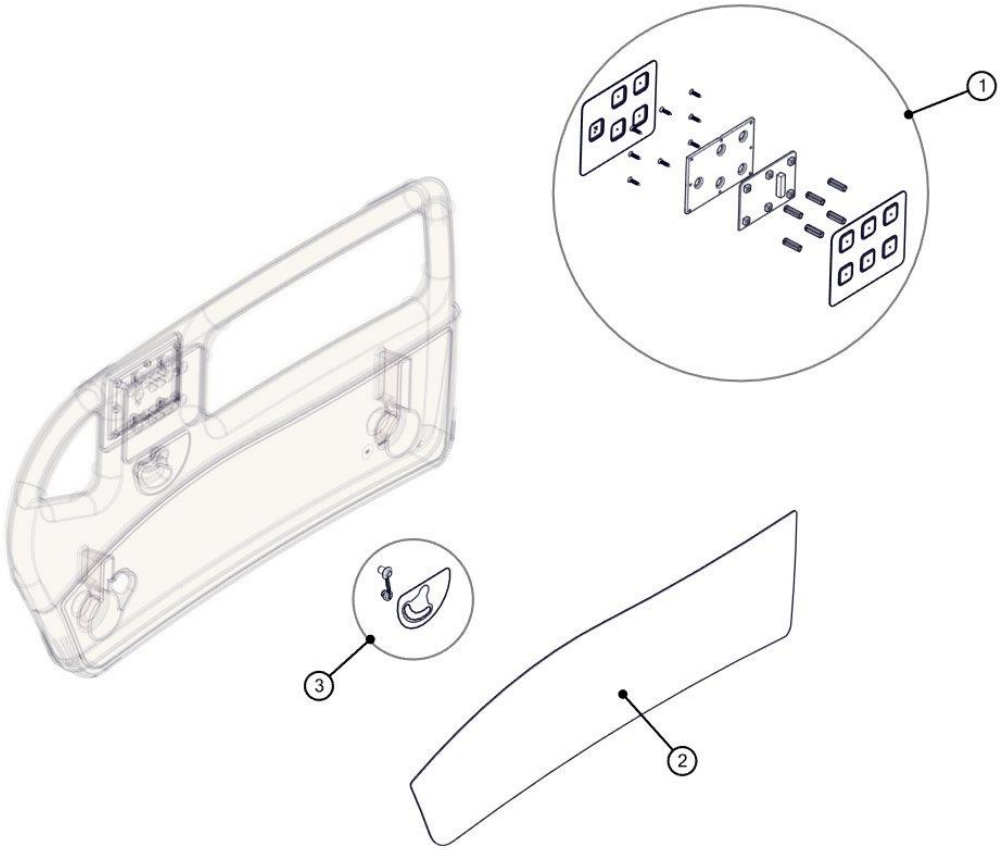
HIGH HEAD RAIL PANEL COMPONENTS



ITEM	KIT #	KIT DESCRIPTION
1	S0070	Service Kit, Head Siderail PCB Replacement Kit (PL)
	S0071	Service Kit, Head Siderail PCB Replacement Kit (PR)
	S0109	Service Kit, Side Rail Control Overlay A (PL Outside)
	S0110	Service Kit, Side Rail Control Overlay B (PL Inside)
	S0111	Service Kit, Side Rail Control Overlay C (PR Inside)
	S0112	Service Kit, Side Rail Control Overlay D (PR Outside)
2	S0087-XX	Service Kit, High Head Rail Inlays, Pair (where XX signifies Colour Option)
3	S0420	Service Kit, Head Angle Overlay Pendulum (PL)
	S0421	Service Kit, Head Angle Overlay Pendulum (PR)

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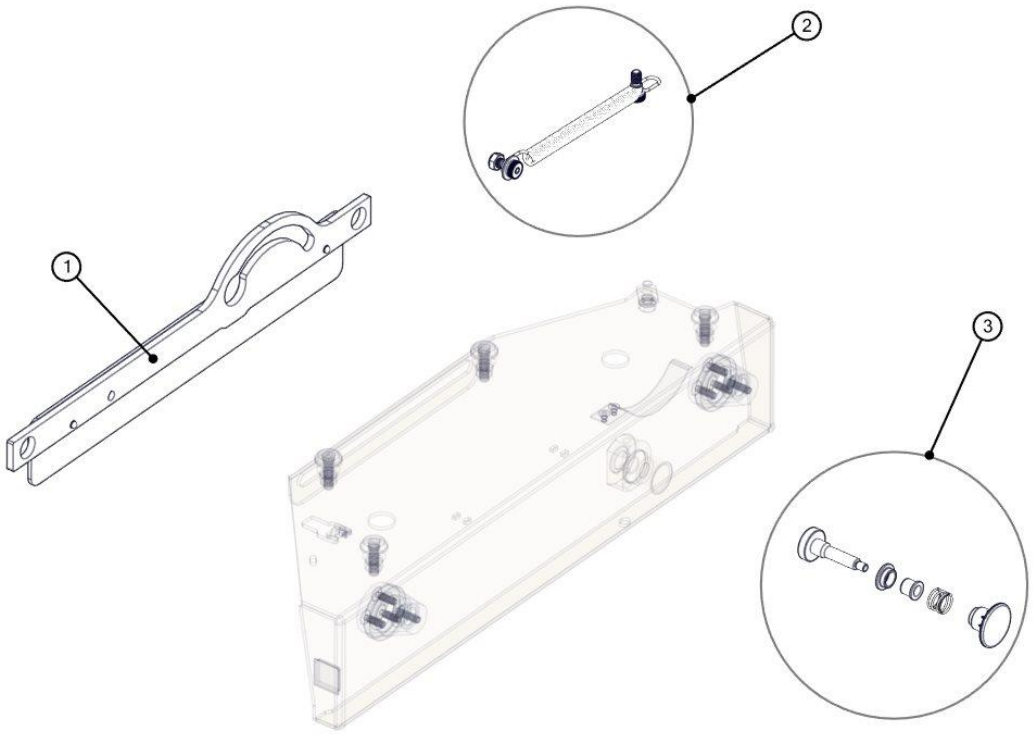
HIGH HEAD RAIL BRACKET COMPONENTS



ITEM	KIT #	KIT DESCRIPTION
1	S0259	Service Kit, High Rail Linkage & Shield (PL)
	S0258	Service Kit, High Rail Linkage & Shield (PR)
2	S0424	Service Kit, High Rail Dampening Spring
3	S0368	Service Kit, High Side Rail Knob & Latch Pin Assembly

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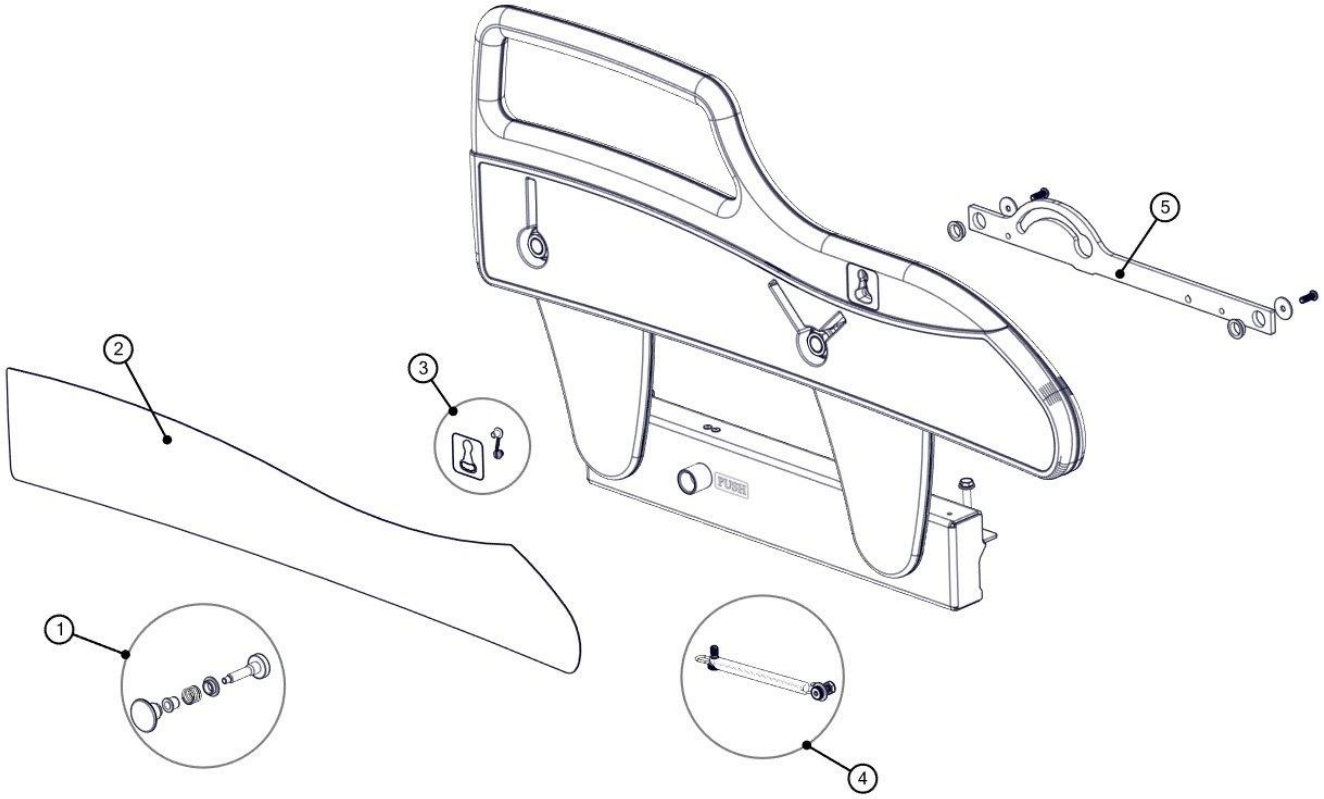
HIGH FOOT RAILS



ITEM	KIT #	KIT DESCRIPTION
1	S0368	Service Kit, High Side Rail Knob & Latch Pin Assembly
2	S0088-XX	Service Kit, High Head Rail Inlays, Pair (where XX signifies Colour Option)
3	S0422	Service Kit, Trend Angle Overlay Pendulum (PL)
	S0423	Service Kit, Trend Angle Overlay Pendulum (PR)
4	S0424	Service Kit, High Rail Dampening Spring
5	S0263	Service Kit, High Rail Linkage (PL)
	S0262	Service Kit, High Rail Linkage (PR)

COMPLETE RAIL ASSEMBLIES

KIT #	KIT DESCRIPTION
S0097	Service Kit, High Foot Rail & Bracket Assembly, PR
S0098	Service Kit, High Foot Rail & Bracket Assembly, PL
S0251	Service Kit, High Foot Rail & Bracket Assembly, PR FILLED
S0252	Service Kit, High Foot Rail & Bracket Assembly, PL FILLED

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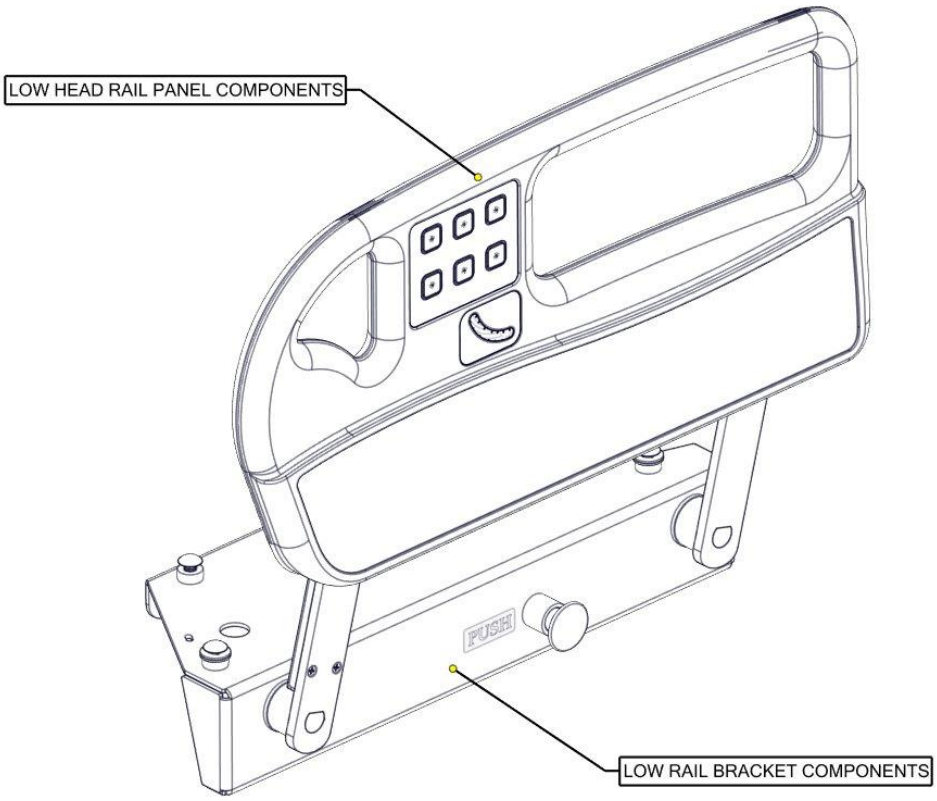
LOW HEAD RAILS



ITEM	KIT #	KIT DESCRIPTION
1		SEE LOW HEAD RAIL PANEL COMPONENTS
2		SEE LOW HEAD RAIL BRACKET COMPONENTS

COMPLETE RAIL ASSEMBLIES

KIT #	KIT DESCRIPTION
S0038	Service Kit, Low Head Rail & Bracket Assembly, PR
S0039	Service Kit, Low Head Rail & Bracket Assembly, PL

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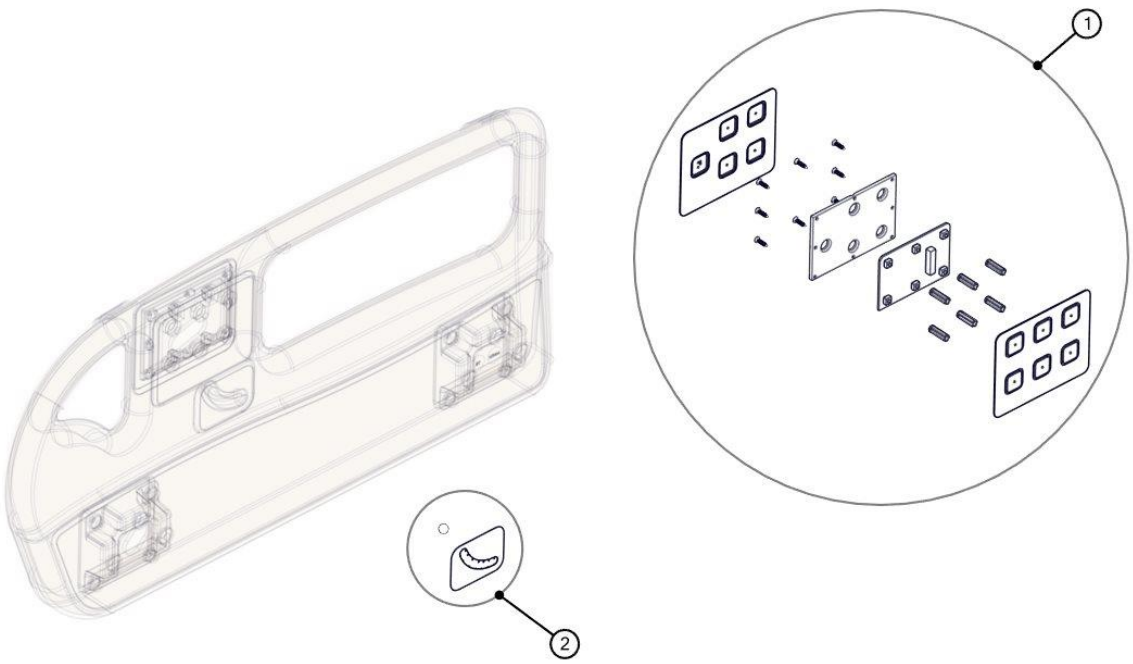
LOW HEAD RAIL PANEL COMPONENTS



ITEM	KIT #	KIT DESCRIPTION
1	S0070	Service Kit, Head Siderail PCB Replacement Kit (PL)
	S0071	Service Kit, Head Siderail PCB Replacement Kit (PR)
	S0109	Service Kit, Side Rail Control Overlay A (PL Outside)
	S0110	Service Kit, Side Rail Control Overlay B (PL Inside)
	S0111	Service Kit, Side Rail Control Overlay C (PR Inside)
	S0112	Service Kit, Side Rail Control Overlay D (PR Outside)
2	S0106	Service Kit, Head Angle Overlay Complete (PL)
	S0105	Service Kit, Head Angle Overlay Complete (PR)

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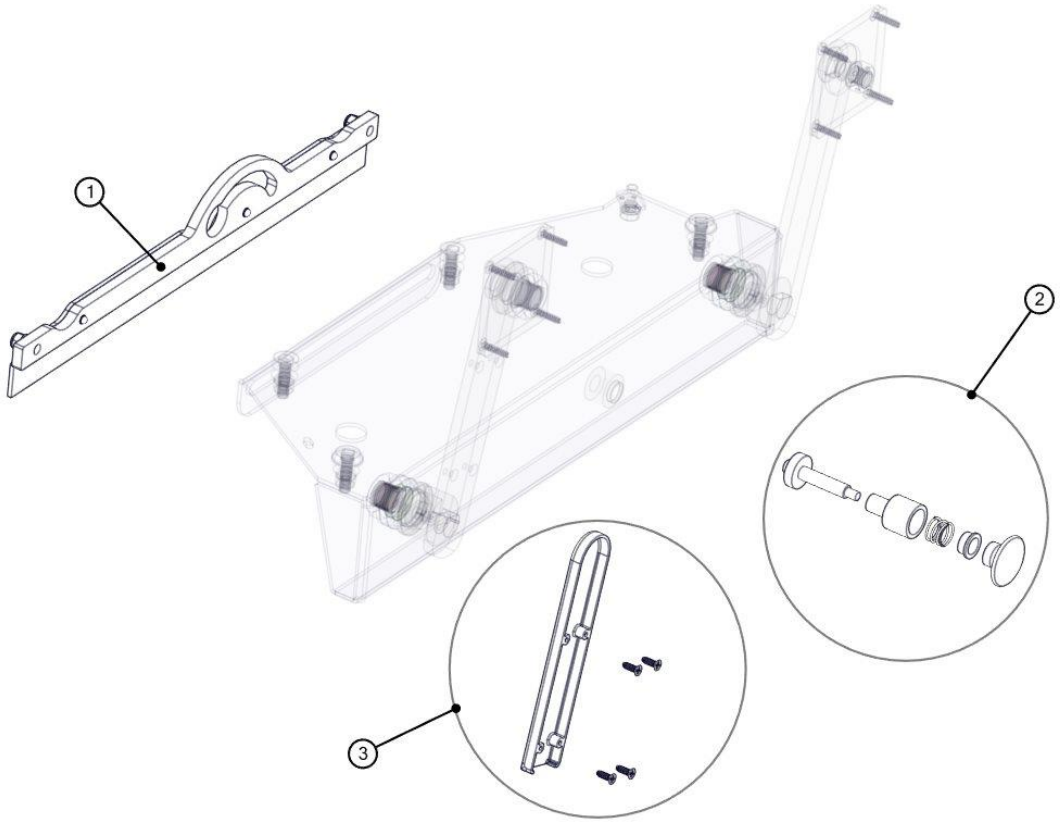
LOW HEAD RAIL BRACKET COMPONENTS



ITEM	KIT #	KIT DESCRIPTION
1	S0028	Service Kit, Low Rail Linkage & Shield (PL Head)
	S0029	Service Kit, Low Rail Linkage & Shield (PR Head)
2	S0001	Service Kit, Low Rail Knob & Latch Pin Assembly
3	S0199	Service Kit, Low Rail Arm Cable Cover

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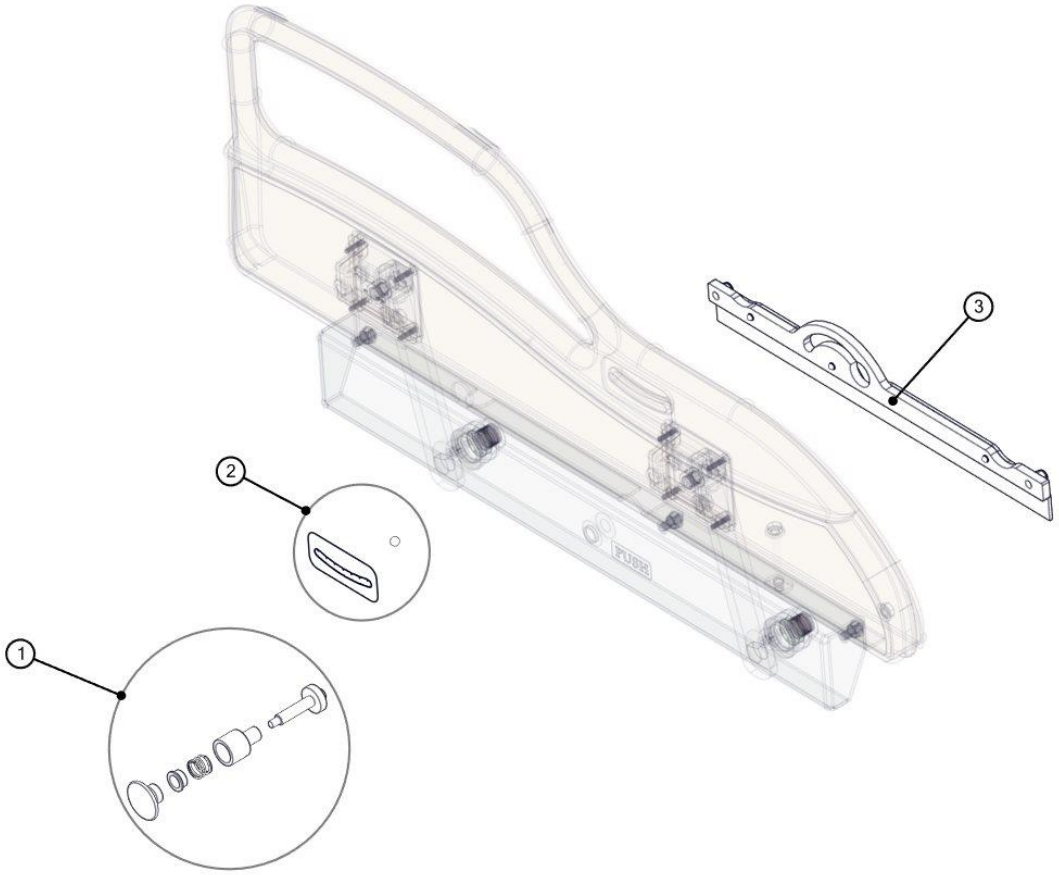
LOW FOOT RAILS



ITEM	KIT #	KIT DESCRIPTION
1	S0001	Service Kit, Low Rail Knob & Latch Pin Assembly
2	S0108	Service Kit, Trend Angle Overlay (PL)
	S0107	Service Kit, Trend Angle Overlay (PR)
3	S0028	Service Kit, Low Rail Linkage & Shield (PR Foot)
	S0029	Service Kit, Low Rail Linkage & Shield (PL Foot)

COMPLETE RAIL ASSEMBLIES

KIT #	KIT DESCRIPTION
S0040	Service Kit, Low Foot Rail & Bracket Assembly, PR
S0041	Service Kit, Low Foot Rail & Bracket Assembly, PL

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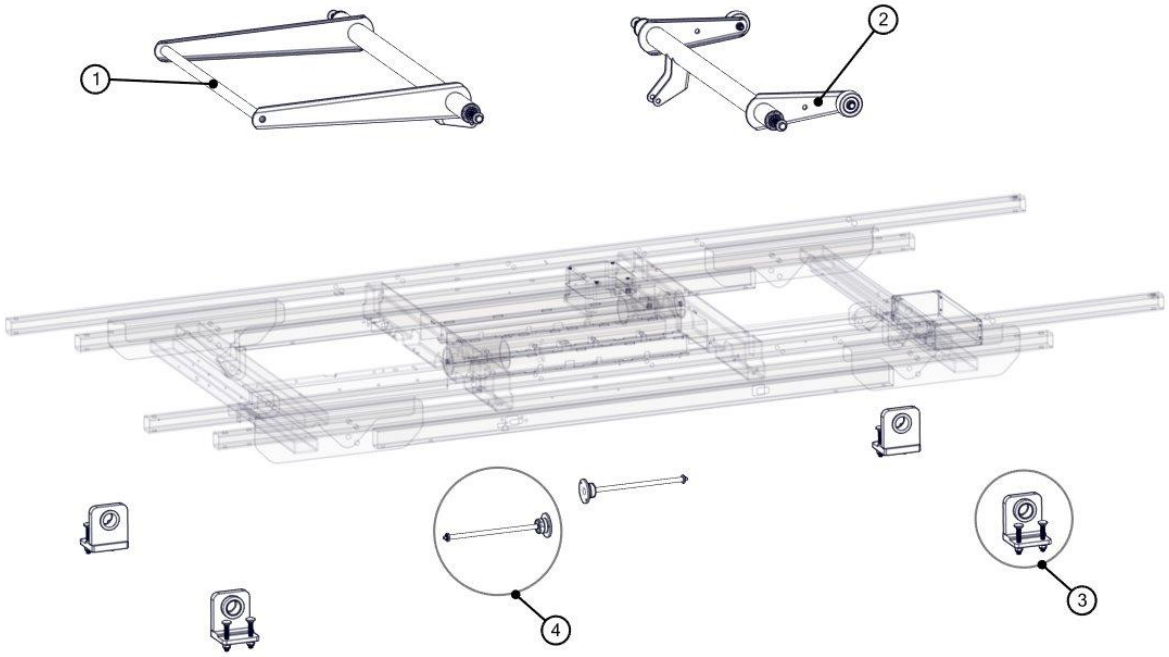
UPPER FRAME



ITEM	KIT #	KIT DESCRIPTION
1	S0018	Service Kit, Head Gatch Assembly
	S0083	Service Kit, Head Gatch Assembly (Manual CPR)
2	S0020	Service Kit, Foot Gatch Assembly
3	S0425	Service Kit, Control Arm Hinge Block
4	S0426	Service Kit, Retainer Assembly Hi/Lo Spring

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